PRESS RELEASE

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Contact:

Allan Sobol
The Consiglieri Group, LLC (Marketing Agent)
Voice 602 504-6050
Fax 866 521-8606
Consiglierillc@gmail.com

Arizona Association of Dispensary Professionals
10640 N 28th Ave
Suite C-205-2
Phoenix, AZ 85029

AZDHS and MPP Acting in Collusion to limit access to Dispensary Applicants.

Monopolization abuses outlined in letter to Arizona Heath Department.

This is the formal response from the Arizona Association of Dispensary Professionals , (AZADP), to the Arizona Department of Health Services, (AZDHS) concerning the implementation of the Arizona Medical Marijuana Act

The AZADP is an organization comprised of over 4600 members. AZADP membership includes concerned dispensary candidates, individuals who believe they are qualifying patients, Physicians and other individuals and entities involved in the Marijuana industry.

While we want to believe Mr. Humble when he states that, (**EXHIBIT A**), "Fairness and Transparency are the keys to effectively implementing the AZ Medical marijuana Act", the evidence contained herein suggest otherwise.

We believe that the AZDHS has been influenced by and is conspiring with other organizations, namely the Marijuana Policy Project, (MPP) and their recently established association, the Arizona Medical Marijuana Association, (AzMMA), to create an elitist and monopolistic program where only the wealthy influential, informed sponsors of MPP will qualify for one of the 125 licenses. We believe that the following evidence will show that the AZDHS in collusion with MPP are intentionally developing program rules that are so complicated and costly so as to preclude otherwise qualified applicants merely on the basis of wealth and influence. We believe it is the intention of MPP to control the marketplace.

Accordingly, we submit the following:

Citations:

1. **Arizona Medical Marijuana Act,** hereinafter referred to as "**TITLE 36**"
2. **Arizona Department of Health Services,** hereinafter referred to as **"AZDHS"**
3. **Marijuana Policy Project** hereinafter referred to as **"MPP",** a national political action committee who sponsored Proposition 203 in Arizona. MPP has a local chapter in Arizona.
4. **Arizona Medical Marijuana Association** hereinafter referred to as **"AMMA"**. An association recently established by MPP
5. **Arizona Association of Dispensary Professionals** hereinafter referred to as **"AZADP".** An independent association comprised of concerned citizens.
6. **Arizona Voter's protection Act** hereinafter referred to as **"AVPC"**. A 1998 voter approved initiative petition amending the Arizona Constitution, to revoke the government's power to amend an initiative measure approved by a majority of the votes cast thereon, unless the amending legislation furthers the purposes of such measure. (AZ Cons Article 4 Section 1(6)(c).
7. **Regulatory Bill of Rights,** (A.R.S 41-1001 01) hereinafter referred to as **"TITLE 41"**. An Arizona law to ensure fair and open regulation by state agencies, limiting a state agencies rule making ability to subject matter listed in the specific statute and provides for citizens right to file a complaint with the States Administrative Rules Oversight Committee.
8. **Affirmative Defense,** (A.R.S. 36-2802), hereinafter referred to as **"ARS36-2802"**. Qualifying Patients and Caregivers mat assert medical purpose as a defense to any prosecution of an offense involving marijuana
9. **Sherman Antitrust Act:** To establish a violation of The Sherman Act, Monopoly Power may be defined as the power to fix prices to exclude competitors, or to control the market in the relevant geographical area in question

Prefatory Statement:

AZADP was established as a direct concern of so many individuals who are alarmed at the direction the AZDHS is taking in their rule making progress. Prior to the election some of our members where involved with MPP and provided us with internal documents generated in the course of MPP's campaign operations. These documents will be produced herein and used as evidence to support our arguments.

In September, 2010 MPP established an advisory committee. According to the local Campaign Manager for MPP, Andrew Meyer, this Advisory Committee was established at the request of AZDHS. Presumably, AZDHS was concerned that should the voters approve Prop 203, their understaffing and budget cuts would curtain their ability to complete the rule making process in the time allowed under the law. (120 days). According to Meyers, AZDHS asked MPP if they could assist AZDHS by preparing some proposed rules for consideration by AZDHS. "A blueprint to help AZDHS start the process". MPP agreed to assist AZDHS and established the Advisory Committee, also known as the "Roundtable". MPP invited 12-14 of its members to join the Roundtable and create proposed rules for consideration by AZDHS. Presumably most of the members on the Roundtable were either dispensary candidates or have other business interest in the medical marijuana industry.

The members of the roundtable were divided into "task forces" each given a specific assignment. (EX: *Cultivation rules, testing /quality control, security, applications, qualifications, etc)* The roundtable participants also worked together to develop and establish the MMP Association, "AzMMA". It is no coincidence that the acronym for MPP's Association and Title 36 are the identical;

"AzMMA". MPP took ownership of Title 36, and intended to impose its own agenda on the people of Arizona MPP's stated agenda was to limit the competition and to assure that as many of their own members as possible received dispensary licenses. During the weeks leading up to the election, the Round table became fractured. Some of the members realized the true agenda of MPP and resigned from the group.

Let us first understand that MPP is funded and sponsored by very wealthy individuals and organizations. The following evidence will show that MPP invested over half a million dollars of its money to secure an elitist program designed to solely promote the interest of their sponsors. The agenda of MPP is to make the dispensary application process as difficult and expensive as possible to preclude all applicants except the well informed wealthy members of MPP. As evidenced by the attached internal memorandum (**EXHIBIT "B"**), MPP, in the process of establishing it's Association , recommended that, "AZDHS implement dispensary applications and licensing standards that are rigorous enough to deter trivial applications, but that do not unduly impair the ability of serious applicants to operate successfully". It would be a serious conflict of interest to allow a Association comprised of wealthy future dispensary owners to determine what a "trivial application" is, but that is exactly what they moved on to do. Contained within the same documents MPP makes the following recommendations to AZDHS;

A. Would require applicants to provide proof that they have obtained dispensary and /or cultivation facilities that meet the requirements of the ACT and local zoning.
B Requiring that the applicant provide a business plan demonstrating that the licensee will be operational within a specific time frame.
C. Requiring the applicant provide proof of financial competency through a BOND or other means.
D. Requiring that the applicant demonstrate medical expertise by having physicians or pharmacists on staff or engaged as consultants.

Contrary to the assertions of Mr. Humble, (**EXHIBIT A**), clearly these MPP proposals have had significant influence on AZDHS, since all of them are incorporated into the AZDHS proposed rules. Additionally, these proposed rules, should they be adopted, will further the agenda of MPP by adding momentous increases to the cost of obtaining a dispensary license for the following reasons:

A. Section 36-2804, of Title 36, among other requirements, necessitates an applicant to provide AZDHS with a "Physical address of both the Dispensary and Cultivation center, and a sworn statement that the applicant is in compliance with local zoning requirements. This in and of itself creates a significant expense to an applicant, since they will have to secure a physical location without ever knowing if they will qualify for the license. However AZDHS has added a significant additional expense to the cost of the applicant by requiring a Certificate of Occupancy. This adversely changes the intent of Title 36. Under proposed rule R9-17-302, B-5 AZDHS is requiring an applicant, as part of the initial application process, to produce a Certificate of Occupancy. This would require a applicant to not only secure a location for his/her dispensary and Cultivation center, but build-it-out as well at a cost of hundreds of thousands of dollars, all at risk, since all is done without any assurances that they will obtain a license. This rule alone will serve to eliminate all but the wealthiest of applicants.
B. At the request of MPP, **(See EXHIBIT C)**, AZDHS's proposed rules regarding business operations are outrageously over-regulated. We recognize the need to maintain strict business operations, but the proposed rules are simply overkill, intended to play into the hands of MPP's agenda. (More on this below)

C. There are no provisions in Title 36 that requires an applicant to produce a **Bond**. According to statements made by MPP all applicants with less than a million dollars of cash liquidity are considered "Trivial" and should be required to post a two hundred thousand dollar bond. **(See Exhibit D).** While there is no clarity or designation as to the purpose, type , amount or third party beneficiary of said bond, AZDHS has nevertheless, under proposed rule R9-17-302,15-D, and as part of the initial application , asks the question, "Whether the dispensary has a surety bond and , if so, how much?". While we have sought clarification from AZDHS on this point, none has been provided. Attention must also be given to the availability of said bond. Because of the unique nature of the medical marijuana business model, obtaining such a bond might be impossible or extremely costly. Under federal law Medical Marijuana Dispensaries are considered a criminal enterprise; consequently, most if not all insurance companies would consider a request for a bond a very high risk. Therefore, potential applicants may be denied a license merely because he/she is not a millionaire

D. The prompting by MMP to have a medical director on the staff of each dispensary is not necessarily a bad idea Unfortunately, AZDHS, at the urging of MPP has taken the Medical Directors position to place where no Doctor will go thereby making it impossible to comply with this rule, unless you are wealthy enough to afford a full time Doctor on your staff. A medical director retained to provide assistance in developing the medical aspects of the program for a Dispensary is a welcomed idea; however, to have the Medical Director interact with patients or develop any materials for use by patients could be considered interference in a patient-physician relationship. All qualified patients of a dispensary must have a recommending, primary doctor to obtain their registration card. Any log books, rating scales, or guidelines for patient's self-assessment, as set forth in AZDHS proposed rule R9-17-310-2, may create a conflict of interest for the medical Director. This again plays into the main scheme of MPP.

E. We are deeply concerned about the AZDHS's plans concerning the selection process As you will note AZDHS's proposed rules are silent on this matter. On October 29th 2010, Director Humble wrote on his blog, **(Copy Attached EXHIBIT E)**, that he had three choices before him, He asserted that method 3, (*Evaluate the complete application using some kind of objective criteria*), is probably the best because we'd be able to select the best qualified applicants. Humble went on to say, " An Interesting twist on method 3 would be to send the completed (And blindfolded) applications to a 3rd party (e.g. a consulting law firm) and ask them to score the applications for us. It is perhaps more than coincidence that just prior to that Blog entry, MPP sent AZDHS a proposal to use their new Association (AMMA) as an Application Review Board. **(SEE EXHIBIT F). This is the most outrageous conflict of interest we have ever heard of. A group of weathly potential dispensary owners, reviewing their own applications!**

We demand that AZDHS immediately disclose their selection process.

We further suggest, in fairness, and in compliance with AZDHS proposed rule R9-17-319, a, 2, g, that any member of the MPP roundtable be excluded from consideration of a dispensary license.

We would further ask that Director Humble make a full public disclosure as to whether or not any member of AZDHS has had any contact with MPP, AMMA or any representative or agent of said organizations.

As most people know, MPP staff actually wrote Prop 203, now the Arizona Medical marijuana Act. Title 36. What most were not aware of is the fact that under section 6 of Title 36, AZDHS compliance under A.R.S 41-1001 is waived. Title 41, **The Regulatory Bill of Rights**, is an Arizona law to ensure fair and open regulation by state agencies, limiting a state agencies rule making ability to subject matter listed in the specific statute and provides for citizens right to file a complaint with the States Administrative Rules Oversight Committee. Any reasonable person

would have to cast a sinister eye on MPPS reasoning in exempting AZDHS from compliance with these provisions. This exemption eliminates the public's ability to object to the abusive behavior of the AZDHS.

Point by Point Objection to AZDHS Proposed Rules:

1. **Medical Director** Definition: Should change to include any Doctor who is permitted under Title 36 to recommend Medical Marijuana.
2. **Ongoing** Definition: this is merely an attempt on the part of AZDHS to create an artificial bottle neck, choking off a potential revenue stream for struggling new dispensary owners. This is an unfair, abuse of authority on the part of AZDHS, intending to further the agenda of MPP. This rule is intended to dissuade marginal ("Trivia"l) applicants from submitting applications AZDHS should rely on the recommendation of a Arizona licensed Physician, regardless of the relationship period, so long as the recommending physician complies with the provisions of Title 36, or until such time as there is evidence of fraud.

3. ARS 36-2803.4 of the Arizona Medical Marijuana Act requires that the Arizona Department of Health Services rule making be implemented "without imposing an undue burden on nonprofit medical marijuana dispensaries...."

4. ARS 28.1 Section 2 "Findings" of the Arizona Medical Marijuana Act requires the department to take notice of the numerous studies demonstrating the safety and effectiveness of medical marijuana. Arizona's pharmacies and physician offices dispense addictive, dangerous, and toxic drugs that, unlike marijuana, are potentially deadly, yet Arizona's pharmacies and physician offices are not required to have 12 foot walls, constant on-site transmission of video surveillance, residency requirements for principals, or any of the other cruel, arbitrary, and unreasonable regulations proposed by the department.

5. R 9-17-101.10 is an undue and unreasonable burden. 9 foot high chain link fencing, open above, constitutes reasonable security for outdoor cultivation.

6. R 9-17-101.15 is unreasonable and usurps authority denied to the department. It violates the 1998 Arizona Voter Protection Act. The department does not have the authority to deny the involvement of naturopathic and homeopathic physicians as defined by **ARS 36-2806.12.**

7. R 9-17-101.16, R 9-17-101.17, R9-17-202.F.5(e)i-ii , R9-17-202.F.5(h), R9-17-202.G.13(e)I , R9-17-202.G.13(e)iii , R9-17-204.A.4(e)i-ii, R9-17-204.A.4(h), R9-17-204.B , R9-17-204.B.4(f)I, and R9-17-204.B.4(f)Iii are cruel, arbitrary, unreasonable, and usurp authority denied to the department. Those sections violate the 1998 Arizona Voter Protection Act. **ARS 36-2801. 18(b)** defines an assessment, singular, as sufficient. The Arizona Medical Marijuana Act does not give the department authority and the 1998 Arizona Voter Protection Act denies the department authority to require multiple assessments, require "ongoing" care, or redefine the patient-physician in any way, much less to promulgate a relationship among patient, physician, and specialist that is found nowhere in the practice of medicine. Nowhere in medicine is a specialist required to assume primary responsibility for a patient's care. Nowhere else in the practice of medicine does Arizona require a one-year relationship or multiple visits for the prescription or recommendation of any therapy, including therapies with potentially deadly

outcomes. Marijuana is not lethal, but the department usurps authority to treat it with cruel and unreasonable stringency far beyond the stringency imposed upon drugs that are deadly. Plainly, it is dangerous and arbitrary for the department to suggest that a cannabis specialist assume primary care of cancer, HIV/AIDS, ALS, multiple sclerosis, Hepatitis C, and other potentially terminal qualifying conditions when the cannabis specialist may not have the requisite training or experience to do so. The department's regulations are a cruel, unreasonable, and arbitrary usurpation of authority and denial of patients' rights of choice, including their rights to choose other medical providers, other sources of care or information, or even to choose not (or cannot afford) to seek other medical care at all (whether prior or subsequent to application).

8. R9-17-102.3, R9-17-102.4, R9-17-102.7, R9-17-102.8, R9-17-104.5 , R9-17-105.4, R9-17-203.A.3, R9-17-203.B.8, R9-17-203.C.5, R9-17-304.A.11 usurp authority denied to the department. **ARS 36-2803.5** only gives authority to the department for application and renewal fees, not for changes of location or amending or replacing cards.

9. R9-17-103, R9-17-202.F.1(h), R9-17-202.G.1(i), and R9-17-204.B.1(m) are cruel, arbitrary, and unreasonable. Though many qualifying patients, qualifying patients' parents, and their caregivers suffer financial and medical hardship, the sections make little or no provision for patients, parents, and caregivers without internet skills or internet access.

10. R9-17-106.A(2) is cruel, arbitrary, and unreasonable. The regulation does not allow for addition of medical conditions that cause suffering, but do not impair the ability of suffering patients to accomplish their activities of daily living. For example, conditions such as Post-Traumatic Stress Disorder (PTSD), Anxiety, Depression, and other conditions may cause considerable suffering, yet still allow patients to accomplish their activities of daily living.

11. R9-17-106.C is cruel, arbitrary, and unreasonable. The regulation only allows suffering patients of Arizona to submit requests for the addition of medical conditions to the list of qualifying medical conditions during two months of every year.

12. R9-17-202.B is cruel, arbitrary, and unreasonable. Qualifying patients may need more than one caregiver to ensure an uninterrupted supply of medicine.

13. R9-17-202.F.5(e)i-ii , R9-17-202.F.5(h) cruel, arbitrary, unreasonable, and usurps patients' rights to choose other providers or sources of information

14. R9-17-202.F.6(k)ii, R9-17-204.A.5(k)ii , R9-17-204.C.1(j)ii , R9-17-302.B.3(c)ii, R9-17-308.7(b), R9-17-308.7(b), and R9-17-309.5(b), are arbitrary and unreasonable. If a caregiver already has a valid caregiver or dispensary agent registry card, no additional fingerprints need to be submitted.

15. R9-17-205.C.2 and R9-17-320.A.3 are arbitrary and unreasonable. A registry card should not be revoked for trivial or unknowing errors. Revocation of a card should not be allowed unless the applicant knowingly provided substantive misinformation.

16. R9-17-302.A, R9-17-302.B.1(f)ii, R9-17-302.B.1(g), R9-17-302.B.3(b) , R9-17-302.B.3(d)i-ix, R9-17-302.B.4(c), R9-17-302.B.4(d), R9-17-302.B.15(a), R9-17-302.B.15(b), R9-17-302.B.15(d), R9-17-306.B, R9-17-307.A.1(e), R9-17-307.A.3, R9-17-307.C, R9-17-308.5, R9-17-319.A.2.(a), R9-17-319.B are arbitrary, unreasonable and usurp authority denied to the department. These sections violate the 1998 Arizona Voter Protection Act. The department does not have the authority to establish residency requirements, control the occupation of the principal officers or board members, require surety bonds, require a medical director, require security measures

that are an undue burden (security measures for non-toxic marijuana that exceed security measures required for toxic potentially lethal medications stored at and dispensed from Arizona pharmacies and physician offices), require educational materials beyond what the law requires, require an on-site pharmacist, require constant, intrusive, or warrantless surveillance, or regulate the portion of medicine cultivated, legally acquired by a dispensary, or transferred to another dispensary or caregivers.

17. R9-17-310 is arbitrary, unreasonable and usurps authority denied to the department. These sections violate the 1998 Arizona Voter Protection Act. The department has no authority to require a medical director, much less to define or restrict a physician's professional practice.

18. R9-17-313.B.3 is arbitrary, unreasonable and usurps authority denied to the department. This section violates the 1998 Arizona Voter Protection Act. The department has no authority to place an undue burden on recordkeeping for cultivation or to require the use of soil, rather than hydroponics or aeroponics, in cultivation of medicine.

19. R9-17-313.B.6 is arbitrary, unreasonable and usurps authority denied to the department. This section violates the 1998 Arizona Voter Protection Act. The department has no authority to place an undue burden on recordkeeping by requiring the recording of weight of each cookie, beverage, or other bite or swallow of infused food.

20. R9-17-314.B.2 is arbitrary, unreasonable and usurps authority denied to the department. This section violates the 1998 Arizona Voter Protection Act. Especially in the absence of peer-reviewed evidence, the department has no authority to require a statement that a product may represent a health risk.

21. R9-17-315 is arbitrary, unreasonable and usurps authority denied to the department. This section violates the 1998 Arizona Voter Protection Act. The department has no authority to place an unreasonable or undue burden by requiring security practices to monitor a safe product, medical marijuana, that is not required for toxic, even lethal, products.

22. R9-17-317.A.2 is arbitrary, unreasonable and usurps authority denied to the department. This section violates the 1998 Arizona Voter Protection Act. The department has no authority to require the daily removal of non-toxic refuse.

ADDITIONAL RECOMMEDATIONS:

23. SURETY BOND: Clarify the purpose, the type, the amount and the third party beneficiary, of the surety bond, or eliminate its reference from the rules.

24. NON-PROFIT ENTITY: Clarify the need to establish a non-profit entity. Title 36 only requires an applicant to operate the dispensary under a non-profit "basis". Can an applicant establish a LLC or other entity so long as his/her bylaws comply with Title 36?

25. 70% COOPERATIVE GROW: Clarify if a group of dispensaries can form a cooperative to grow their medical marijuana under one roof, so long as the facility is in compliance with Title 36 and the AZDHS rules.

26. SEEDS: Please clarify where a dispensary owner can purchase his initial seeds.

27. LANDLORD RIGHTS: Please clarify landlord rights with respect to entry and inspection of a dispensary/ cultivation facility. (Assuming the landlord is not a registered agent of the Dispensary). Additionally, please clarify access by a repair service to enter upon the restricted areas of a dispensary/cultivation to make necessary repairs.

28. <u>TWO STAGE APPLICATION PROCESS: R9-17-302</u> Applying for Dispensary Registration Certification; we believe the proposed rules regarding the application process are inherently unfair and favor the wealthy. The average person who may otherwise qualify would be reluctant to invest hundreds of thousands of dollars in a dispensary application without knowing if they will get a license. In order to equalize the application process we believe AZDHS should adopt a two stage application process as follows:

1. Review the principals and legal entity first. Perform whatever background checks AZDHS desires, including FBI and all the other requirements as set forth in the proposed rules relevant to the principals and legal entities.
2. Issue a conditional License to the 125 most qualified individuals subject to approval of the facilities. (dispensary and cultivation sites)
3. The conditional license would require that the applicant to complete the build-out and/or construction of the facilities within 90-120 days
4. Thereafter, the conditionally approved applicant would submit the second half of his application (Facilities) for inspection and approval.
5. The second half of the application must meet all the requirements of the proposed rules relevant to the facilities.
6. Provided the applicant meets all the facility requirements he/she would then be issued a Dispensary Registration Certificate
7. This system allows for fairness across all demographic and financial groups. It would not preclude individuals simply because they are not millionaires, and would allow those that are chosen to obtain the financing they need to complete the project. Fairness and transparency requires AZDHS to adopt this application process or similar one.

<u>IN CONCLUSION:</u>

Taken in totality, it appears that AZDHS is working in collusion with MMP to make this application process as difficult as possible, beyond what is fair and reasonable. What was alleged to be "fair and transparent", has now become biased and opaque, demanding a comprehensive review and explanation.

The sole agenda of AZADPs is to assure the success of the Arizona Medical Marijuana Act. To bring the dispensaries out of the dark corner of society into the main stream of America. We understand that to accomplish that we need to change the image, we need to exceed the highest standards, and we need to conduct ourselves and our businesses with the utmost professionalism, always in full compliance with the law.

While you allege that "nobody outside the department is involved in the development of your informal draft rules", it appears that is not correct. The fact remains you may not know if MPP is communicating with your underlings. The answer to your problem is to embrace ALL these organizations rather than create the illusion that you are NOT being influenced by some. You may want

to establish a round table of your own, invite all the organizations, associations and industry leaders in Arizona including MPP, to offer and exchange ideas. That way nobody feels left out, and you perhaps may even learn a few things.

We would welcome the opportunity to assist you in organizing a round table of industry, leaders. In the alternative we hope you will make a full disclosure of your involvement with MPP.

Sincerely,

Allan Sobol
President/ AZADP
602 504-6050

# # #

EXHIBITS, Attached below

AZ Dept. of Health Services Director's Blog

Fairness and Transparency are the Keys to Effectively Implementing the AZ Medical Marijuana Act

Throughout my career I've learned that a cornerstone of working with the community is to make sure you have a true partnership. Every partnership starts with trust. In order to establish and maintain trust throughout our implementation period the ADHS needs to ensure that our process is completely fair, open, honest and transparent. Part of establishing the six pillars that result in trust means that we need to ensure that everybody has equal access to information and making sure that everybody has an equal voice in the process.

Our top priority as we implement the Arizona Medical Marijuana Act [http://www.azsos.gov/election/2010/general/ballotmeasuretext/I-03-2010.pdf] over the coming months is to ensure that the processes we use to develop the regulations for the program are fair and transparent. Moreover, I want to ensure that we have the opportunity to benefit from everybody's ideas.

It is my understanding that there are individuals in the community that are suggesting that they somehow have inside information into or influence on our processes and decision-making. Some are even suggesting that they already have a dispensary or that they have one on reserve". This is not the case. Nobody outside the department is involved in the development of our informal draft rule that will be posted for public comment on December 17. Nobody and no organization has any influence on our decision making, nor does anybody have any inside track to a license of any kind. Period.

We are committed to ensuring that the process is completely transparent and that everybody in the State has an equal chance at input, which is why I've directed my rules team to write a completely internally driven first initial draft. On December 17 we'll invite (electronic) input to everybody at once from our hub 203 website [http://azdhs.gov/prop203/]. We look forward to receiving input from all of Arizona's residents once our draft is posted.

Follow Medical Marijuana information [http://directorsblog.health.azdhs.gov/?s=marijuana]

← Previous Entry: Medical Marijuana Commission Disappointing Ruling
Next Entry: Cholera in Haiti →

15 comments

Exhibit "A"

Here are some of my initial thoughts regarding interfacing with the DHS on the dispensary licensing/application process:

Our industry association wants to encourage the DHS to implement dispensary application and licensing standards that are rigorous enough to deter trivial applicants, but that do not unduly impair the ability of serious applicants to operate successfully.

As a government agency, the DHS cannot implement application/licensing requirements that can be construed as discriminatory. On the other hand, the DHS is charged with protecting the public interest, and can act on recommendations that demonstrably promote the public good. Some of the considerations that were identified at the meeting as possibly warranting DHS attention in the application/licensing process included:

- Requiring that the applicant provide proof that they have obtained dispensary and/or cultivation facilities that meet the requirements of the Act and local zoning regulations.
- Requiring that the applicant provide a business plan demonstrating that the licensee will be operational within a specific timeframe.
- Requiring that the applicant provide proof of financial competency through a bond or other means.
- Requiring that the applicant demonstrate medical expertise by having physicians or pharmacists on staff or engaged as consultants.
- Requiring that the applicant establish training processes for all employees, potentially including third party certification like liquor licensees.

Other possible DHS application/licensing requirements not mentioned at the meeting, but inherent in the Act include facility floor plans, specification of facility security provisions, inventory storage and transportation provisions, accessibility, signage, street visibility, compliance with dispensing limits, facility access procedures, nonprofit articles of incorporation, corporate bylaws, disclosure and background checks for directors, officers and agents, patient verification procedures, record keeping procedures and proactive anti-diversion policies.

My background is in aviation, which is a highly regulated industry that may provide regulatory processes that may be adaptable to the medical marijuana industry. One important element to air safety is procedures to verify that only certified parts (including trace-ability 'back to birth') are installed on aircraft. Similar procedures requiring cultivators to identify and document production 'lots', and for distributors to implement record keeping that traces all marijuana sold back to certified production lots, could be a way to reduce illegal diversion of medical marijuana.

Exhibit "B"

Perhaps even more applicable is the requirement by the FAA that all aircraft maintenance facilities operate in accordance with an FAA-approved internal procedures manual (IPM). An IPM specifies procedures for virtually every activity undertaken by a repair station, is updated regularly, and is available and familiar to every certified aircraft technician.

The FAA does not specify the exact form in which any given IPM must be written to be approved. Instead, the FAA establishes topics that must be addressed and some criteria that must be met regarding certain of those topics. Similarly, the DHS might welcome assistance in developing criteria for an IPM-type document that must be submitted to the DHS to demonstrate sufficient operational planning and competency as part of the award process for medical marijuana dispensaries and/or cultivation facilities. Not only would this application/licensing requirement winnow out many of the less serious or competent applicants, it would have the added benefit actually establishing processes and procedures that would ensure that dispensaries and cultivation facilities operate in an efficient and responsible manner.

Appendix C

Dispensary Internal Procedures Manual Requirements

Notice: Each certified Dispensary shall be required to maintain on its premises at all times a Dispensary internal procedures manual (DIPM) approved by the Arizona Department of Health Services (DHS) All revisions to the DIPM must be approved in writing by the DHS, and each DIPM must contain a form that logs any revisions to the DIPM to ensure that the DIPM on file at the DHS and on site at the Dispensary is the most current revision. All Directors, Officers and Agents of the Dispensary are required to be familiar with, and have access to, the most current revision of the DIPM. Failure to meet any of these requirements can be grounds for revocation of the Dispensary certification registration.

Each DIPM submitted to the DHS for approval must provide procedures, satisfactory to the DHS at its sole discretion, governing the activities of the Dispensary. Each DIPM must also include information regarding processes and facilities necessary to fulfill the operational requirements of the Dispensary. The procedures, processes and facility requirements that must be addressed in the DIPM include:

A) A floor plan of the Dispensary showing all windows, accesses, counters, display cases, seating, restrooms, storage areas, office areas, waiting areas, shipping and receiving areas, employee areas, and, if applicable, marijuana grow and processing areas.

B) A detailed description of all security devises utilized to prevent the diversion of marijuana and protect customers and corporate personnel.

C) A description of the corporation's security policies, safety and security procedures, personal safety and crime prevention techniques

D) A corporate organization chart

E) A list of all equipment used to weigh, measure and dispense marijuana

F) Procedures and forms to regularly calibrate and record the calibration of all equipment used to dispense marijuana.

G) Procedures and forms to record all DIPM revisions

H) A list of all duties and responsibilities and/or employment contracts denoting the same for all Directors, Officers and Agents of the corporation.

I) An on-site curriculum, or a copy of a contract or proposed contract with outside resources capable of meeting employee training needs, which training must include training in professional conduct, ethics, patient confidentiality, how to respond to an emergency, including robbery or a violent accident, and the performance of the duties and responsibilities of the employee as specified in the DIPM

Exhibit "C"

J) Training documentation maintained for each employee including the forms and procedures to record all training of corporate employees, verified by signatures of both the employee and a corporate officer or director, with such documentation to be kept on file for at least 6 months following termination of each individual employee

K) Forms and procedures for listing all regularly used subcontractors and service providers and, when appropriate, forms and procedures to perform and record quality assurance audits of all such subcontractors and service providers.

L) A description of the corporation's distribution criteria for qualified patients and approved caregivers.

M) A description of how the corporation will safely dispense medical marijuana to qualified patients or qualified patient's primary caregivers

N) A description of the corporation's record keeping policies, procedures and forms

O) A description of the corporation's policy on the right of the entity to refuse service.

P) A description of the packaging for the medical marijuana that the corporation will distribute, including the name of the strain, batch and quantity. The label must display a statement that the marijuana is for medical use only and not for resale.

Q) A description of how the corporation will keep staff and patients updated on informational developments in the field of medical marijuana

R) A personnel record for each employee that includes an application for employment, training records and a record of any disciplinary action taken

S) A Forms Control Page that identifies all corporate forms by from number, name, revision number and date last updated.

T) Self-Audit program is to assure that all procedures are appropriately implemented, and to provide the necessary feedback for continuous improvement in the operation.

Appendix D

Cultivation Facility Internal Procedures Manual Requirements

Notice: Each certified Dispensary cultivation facility shall be required to maintain on its premises at all times a cultivation facility internal procedures manual (CFIPM) approved by the Arizona Department of Health Services (DHS). All revisions to the CFIPM must be approved in writing by the DHS, and each CFIPM must contain a form that logs any revisions to the CFIPM to ensure that the CFIPM on file at the DHS and on site at the Dispensary is the most current revision. All Directors, Officers and Agents of the Dispensary that have access to, or interact with, the cultivation facility are required to be familiar with, and have access to, the most current revision of the CFIPM. Failure to meet any of these requirements can be grounds for revocation of the Dispensary certification registration.

Each CFIPM submitted to the DHS for approval must provide procedures, satisfactory to the DHS at its sole discretion, governing the activities of the cultivation facility. Each CFIPM must also include information regarding processes and facilities necessary to fulfill the operational requirements of the cultivation facility. The procedures, processes and facility requirements that must be addressed in the CFIPM include:

A) A floor plan of the cultivation facility showing all windows, accesses, counters, racks, lighting schematic, air conditioning/filtration provisions, restrooms, storage areas, office areas, processing areas, shipping and receiving areas, and employee areas.

B) A detailed description of all security devises utilized to prevent the diversion of marijuana and protect corporate personnel.

C) A description of the cultivation facility's security policies, safety and security procedures, personal safety and crime prevention techniques.

D) A list of all equipment used to weigh, measure and package marijuana.

E) Procedures and forms to regularly calibrate and record the calibration of all equipment used to weigh and measure marijuana.

F) Procedures and forms to record all CFIPM revisions

G) Forms and procedures for listing all regularly used subcontractors and service providers and, when appropriate, forms and procedures to perform and record quality assurance audits of all such subcontractors and service providers

P) A description of the tracking procedures including segregation and identification by batch and strain, finished product weight by batch and strain, and the location of all marijuana through delivery to the Dispensary.

Q) A description marijuana storage facilities and procedures.

R) A description the cultivation facility's environmental policies and procedures including, but not limited to, disposal procedures for all marijuana byproducts and all marijuana cultivation process byproducts

Mark Siegel <drmsiegel1@hotmail.com>
RE: Greetings
October 20, 2010 9:18:51 AM MST
"randy@wealbridge com" <randy@wealbridge com>

Not that I know of pulled this out of my ass this AM Hope that this is a good start. Didnt send to other guys

From: randy@wealbridge.com
To: drmsiegel1@hotmail.com
Date: Wed, 20 Oct 2010 07:55:10 -0700
Subject: Re: Greetings

Hi Mark,

This is a great start A couple of initial questions before I dive in too far

1. Is this the first real work that has been done on this or is there other work product form the group out there floating around?
2. Do you know if anyone has sourced the applications from any of the different states besides New Mexico, which I saw was passed around last night?
3. Do we have a set of comparative application from say, liquor, pharmacy, etc. ?

Thanks,

Randy

On Oct 20, 2010, at 7:37 AM, Mark Siegel wrote:

Goodmorning Randy

APPLICATION FOR MEDICAL MARAJUANA

Name of applicant
Address
Phone numbers. Home office cell
Social security number
Married. Single
~~Children's names~~
Educational backround ☑ Highschool ☐ college ☐ Post Grad

Occupation Years in current occupation

3 references Names. Address Phone Years known

Applicants Qualifications

Must record fingerprinting with state

No prior felonies

No bankruptcy prior 5 years

Clear record with better business bureau

5000 dollar nonrefundable application fee

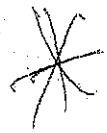
Exhibit "D"

Name of affiliated growing facility

Location of dispensary and letter of approval from municipality

200 thousand dollar performance bond ~~or letter from bank of financial equivalence for start up~~

Summary of prior business and or medical ~~history~~



I, name swear the information above is correct to the best of my knowledge. Signature

From: randy@wealbridge.com
To: dimsiegel@hotmail.com; dlh@novalventures.com
CC: patric.allen@vimec.com
Date: Tue, 19 Oct 2010 22:07:59 -0700
Subject: Greetings

Hello Gentlemen,

Please forward this to anyone else that needs to be included in this conversation prior to our meeting @ 4:30 on Thursday I look forward to seeing everyone's initial ideas.

Thanks and Regards,

Randy Smith

WEALBRIDGE
Randy Smith Managing Partner
4012 E Camelback Road Suite 10
Phoenix Arizona 85018
p 602 [illegible]
f 602 [illegible]
m 602 [illegible]
e randy@wealbridge.com
www.wealbridge.com

WEALBRIDGE
Randy Smith Managing Partner
4012 E Camelback Road Suite 10
Phoenix Arizona 85018
p 602 [illegible]
f 602 [illegible]
m 602 [illegible]
e randy@wealbridge.com
www.wealbridge.com

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AZ Dept. of Health Services Director's Blog

Selecting Marijuana Dispensaries

If Proposition 203 passes (the Arizona Medical Marijuana Act [http://www.azsos.gov/election/2010/general/ballotmeasuretext/I-01-2010.pdf]) one of our key decisions will be how to set up some kind of selection process for approving marijuana dispensary applications. The Act states that the number of *Cannabis* dispensaries will be limited to 10% of the number of pharmacies in the state. As of right now, that would cap the number of dispensary licenses at around 124. Experiences in other states suggest that we can expect to receive far more than 124 applications, meaning that we need to think ahead about how we'd select the successful applicants from all of the folks who send in complete applications.

There are probably a number of ways to do it, but 3 come to mind right away. We could, for example:

1. Use some kind of first-come, first-served process and simply approve the first 124 complete dispensary applications;
2. Place the complete applications in a pool and have some kind of random drawing on a particular date; or
3. Evaluate the complete applications using some kind of objective criteria (such as the professional quality of their business model, security plan, customer validation and inventory system, etc) and select the best applications from the stack for approval.

Method 3 is probably the best because we'd be able to select the best of the qualified applicants, but it would also be far more labor intensive than methods 1 or 2. Method 3 would also be more challenging in terms of ensuring transparency, etc. An interesting twist on method 3 would be to send the completed (and blindfolded) applications to a 3rd party (e.g. a consulting law firm) and ask them to score the applications for us.

We'd also need to think about how to distribute the licenses geographically. The Act states that each county is entitled to at least 1 dispensary, however we might also consider allocating potential license "quotas" on a "per capita" basis by county across the state. Anyway, we'll know next week whether we need to deal with any of the things I've written about over the last few weeks.

Previous Entry: Visit Your Local Farmers Market
Next Entry: AZ's Improving Our Birth Outcomes

18 comments

Exhibit "E"

AZ Medical Marijuana Dispensary Application Review Board Proposal

We fully expect there to be a high number of initial Dispensary applications to the ADHS. It is the recommendation of the Arizona Medical Marijuana Association (AZMMA) that we offer our services to the AZ DHS in the form of a Dispensary Application Review Board. It will be the responsibility of this review board to review all of the Dispensary applications submitted to the ADHS and to make requests of applicants for additional or supporting information. The AZMMA Review Board will then compile a list of the top 124 applications for an AZ Medical Marijuana Dispensary license to the ADHS for their final approval.

Any applications rejected by the ADHS from this initial list shall be replaced with the same number of the next most qualified applications as reviewed by the AZMMA Application Review Board. Once the ADHS has successfully approved all of the 124 AZ Dispensaries to be licensed the review board shall process the remaining applications. These remaining applications shall be processed by the Review Board for selections into either acceptance or rejection classification. For future expansion or attrition these remaining acceptable applications will be submitted to the ADHS for their final approval or rejection as requested.

This process shall insure that the initial applicants will be treated in the same manner as any future applicants when a dispensary license becomes available. i e. an increase in the licensed Pharmacy to Dispensary ratio as well as for any Dispensary dissolutions.

Any board of director change for an AZ dispensary must be submitted to ADHS and the AZMMA Review Board. The Review Board will make recommendations to the ADHS on these changes for their final approval. The AZMMA Review Board will also assist the ADHS as requested with any AZ Dispensary dissolutions.

Exhibit "F"

Licensing Task Group Meeting
October 21, 2010

Attendees

Mark Siegel
Patric Allan
Randy Smith
Gordon Hamilton
Scott _____

Minutes

After discussion, the task group agreed that a highly rigorous application process is the best way to limit frivolous applications and ensure that the most qualified applicants are awarded nonprofit medical marijuana dispensary registration certificates.

Toward that end, the members agreed to use an Arizona DLLC Liquor License Application Form as a format to create a recommended Arizona DHS Medical Marijuana Dispensary Application Form. Also added to the Liquor License framework would be pertinent requirements from an application form created by the New Mexico Department of Health for that State s Medical Cannabis Program, requirements for processes and procedures manuals, requirement of a plan for putting the Dispensary into operation within a reasonable time period following award of the certificate, and proof of financial capability to startup and operate the Dispensary.

Although not unanimously, it was also agreed that the recommended amount of the application fee should be $5,000 and that the application fee should be non-refundable. The group also agreed that since the application fee would be non-refundable, the application should include a comprehensive checklist with a warning that failure to meet **ALL** requirements of the application would result in rejection of the application and forfeit of the application fee

The meeting was then adjourned

Governmental Affairs Issues AZMMA

AZDHS Implementation Plans

From: Randy Smith
Date: Sat, 23 Oct 2010 at 8:12am

According to the uploaded article, the initial plan of AZDHS is to turn the Patient Card responsibilities over to the Office of Vital Records since they already have a computer system capable of receiving and processing this type of data. Does this mean they DO or DO NOT have technology issue @ AZDHS? If so, is it just in the process of applications?

AZDHS is also saying that the Office of Environmental Health will establish the dispensary regulations?

Randy Smith Sun, 24 Oct at 10:18pm

We will have an update as soon as Joe gets in front of them

AzNMA
Arizona Naturopathic Medical Association

[redacted]

Arizona Department of Health Services
Office of the Director
150 North 18th Avenue
Phoenix, Arizona 85007

January 4, 2011

Dear Direct Humble,

The Arizona Naturopathic Medical Association (AzNMA) applauds the effort and dedication of the Arizona Department of Health Services to create a regulatory system that will allow for a responsible Medical Marijuana Program. Thank you for the opportunity to comment on and participate in, the rules making process.

At this time AzNMA has three requests for changes to the rules as the process moves forward. The requests are as follows:

1. The Naturopathic, Allopathic and Osteopathic Boards of Examiners should require physicians who recommend medical marijuana to complete no less than eight hours of training (through classroom situations, seminars at professional society meetings, electronic communications, or otherwise) that covers the clinical, pharmacological, ethical and legal aspects of using medical marijuana in patient care.

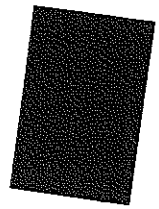
2. Naturopathic Physicians should be included in the definition of "medical director" as they are included in the definition of "physician" in the voter approved Medical Marijuana Act and authorized to recommend medical marijuana to qualifying patients. In this instance naturopathic physicians have the same qualifications as allopathic and osteopathic doctors to successfully serve as medical directors.

3. Patients with a terminal illness should be exempt from the rule requiring a patient to have a professional relationship with a physician for at least one year and assessed for their medical condition on at least four visits prior to being eligible for a medical marijuana recommendation.

AzNMA appreciates the department's attention to these matters and encourages the suggested changes be included in the formal draft rules released later this month.
We have contacted the department and discussed these issues with your rules attorney. Thank you for your time.

Sincerely,

Amy Terlisner N.D.
President of Arizona Naturopathic Medical Association



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Sincerely,
Amy Terlisner N.D.
President of Arizona Naturopathic Medical Association

EL RIO
COMMUNITY
HEALTH CENTER

[redacted]
RECE
11 JAN -5 PM 2:17
ADHS
DIRECTORS OFFICE

January 03, 2011

Will Humble
Director
ADHS
150 North 18th Ave.
Phoenix, AZ 85007

Dear Director Humble,

On behalf of El Rio Community Health Center and our Special Immunology Associates providers who serve over 1,100 HIV and AIDS patients we submit the attached comments on the draft Chapter 17 – Medical Marijuana Program regulations.

There is no consensus within our physician group about whether recommending marijuana is good medical practice. The lack of sufficient clinical trial data demonstrating dose-related effectiveness and detailing risk-benefit analysis as well as the reluctance to recommend a psychoactive inhaled substance with well documented potential for harm (physical and behavioral) contribute to this ambivalence. Even the providers who are comfortable using the existing data to recommend marijuana as a therapeutic option are troubled by the apparent burden of responsibility placed on them for unknown consequences that are implied in the regulatory language.

We are concerned about the challenge this new law and regulations may place on our relationships with existing patients who have no evident need for unconventional therapies. We expect the pressure to "certify" may damage our relationships with such patients or cause them to seek the documentation from non-El Rio providers thereby complicating our providers' ability to manage their primary care.

We thank you for the opportunity to provide comments.

Sincerely,

Kathy Byrne

Arthur Martinez

Kathy Byrne
Executive Director

Arthur Martinez, MD
Chief Medical Officer

Cc: Kevin Carmichael, MD
Sara Vasquez, MD
Richard Feldman, MD
Laurie Mottl, PA
Barry London, MD
Lois Estok,MD

Fees
The law allows the development of a sliding fee scale based on household income for patient applications and we did not see one in the draft regulations. (R9-17-102) The fees for a qualifying patient could prove excessive for some patients and we recommend such a process be incorporated in regulation.

Lack of Complete Data
Will there be any guidelines forthcoming for "dosing" of the drug? Are there clinical trials that can inform patients and providers?

We are very troubled by the requirement that the physician certify that in his/her "professional opinion the patient is likely to receive therapeutic or palliative benefit from the ... medical use of marijuana ..." (R9-17-202 F.5.i) While we recognize this is the language from Prop 203 our physicians would have difficulty with certification of "likely" benefit. Can this language be broadened to "possible benefit?"

Quality of Drug
Who will standardize the supply? How will patients or their designated caregiver know what kinds of chemical additives, including nonorganic pesticides, herbicides and fertilizers are used in the cultivation and production associated with dispensaries?

Interactions
What are known and anticipated interactions (protease inhibitors, silfenadil, SSRIs, warfarin)? Will there be an authoritative source for physicians to rely upon?

Potential for Inappropriate Requests for Drugs
The definition of "ongoing" when used in connection with a physician-patient relationship at 16a. seems important in discouraging marijuana mills but then at part b. it essentially opens the doors to such abuse. Are there any additional qualifiers that could tighten R9-17-101.16.b.?

Our providers are already receiving requests for records from a Phoenix group that seems to be positioning itself to meet the requirements under 16.b.

Impact on Relationship with Patients
In this time of emphasis on a patient centered health care home it seems ironic to us that this new law may cause patients to leave our practice because our providers are not willing to follow the certification process or patients may end up with two primary care providers – one to meet most of their primary health care needs and one to manage their medical use of marijuana.

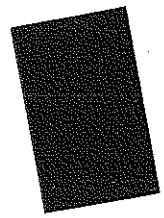
Was any thought given to using a committee for the review and certification process for patients seen inside a group practice – such an approach would preserve the individual patient-provider relationship and allow a more arms length assessment of the value of the medical use of marijuana for each individual case. The way the regulation is written seems to preclude such an approach.

Miscellaneous Concerns

There appears to be no provision for mid-level providers to recommend the use of marijuana for medical reasons. Would this require a physician to certify on behalf of patients managed by a nurse practitioner or physicians assistant? Could this be clarified?

The Institute for Holistic Health and Healing

(A Not For Profit Organization Opening Spring 2011)



Vincent J. Tancredi
vincent.tancredi@gmail.com
6544 S. Oakwood Way
Gilbert, Arizona 85298
(602) 295-4316

January 03, 2011

Arizona Department of Health Services
Mr. Will Humble (ADHS Director)
150 N. 18th Ave
Phoenix, Arizona 85007
(602) 542-1025

Re: Comments, Questions and Concerns; the 12/17/2010 DRAFT Title 9. Health Services; Chapter 17. Department of Health Services – Medical Marijuana Program

Dear Mr. Humble

Thank you for the opportunity to submit comments, questions, and concerns regarding: The 12/17/2010 DRAFT Title 9 Health Services; Chapter 17 Department of Health Services – Medical Marijuana Program. You and your staff have done an excellent job, taking on the exhausting and daunting task of implementing Medical Marijuana for the State of Arizona. Taking lessons from Colorado and California implementation of Medical Marijuana Initiatives, the State of Arizona and your office have perfected a safe, compassionate, and very detailed Medical Marijuana Program draft, attempting to explain and discuss every aspect of what will be a very polished final set of Regulations. **Enclosed is a List of our Comments and Suggestions. Please Review:**

[Comment] Mission Statement

The mission of **The Institute of Holistic Health and Healing** will be to provide the purest, most effective and affordable medical cannabis along with integrated holistic health services. We will create and maintain the standards of excellence for medical cannabis in all that we do. We will continue to foster a

safe and compassionate community that will advance understanding and inspires action. Additionally, it is our position that a highly regulated business structure is required to separate the Medical Marijuana Industry from illegal and black market operators, additionally increasing the status and quality of the wellness models.

ARTICLE 1. GENERAL

R9-17-101. Definitions

8. "Dispensary" means the same as "nonprofit medical marijuana dispensary" as defined in A.R.S. § 36-2801.

13. "Generally accepted accounting principles" means the set of financial reporting standards administered by the Financial Accounting Standards Board, the Governmental Accounting Standards Board, or other specialized bodies dealing with accounting and auditing matters. [Comment] - Very Well Written.

15. **"Medical director" means a doctor of medicine who holds a valid and existing license to practice medicine pursuant to A.R.S. Title 32, Chapter 13 or its successor or a doctor of osteopathic medicine who holds a valid and existing license to practice osteopathic medicine pursuant to A.R.S. Title 32, Chapter 17 or its successor and who has been designated by a dispensary to provide medical oversight at the dispensary.** [Comment] - SHOULD ALSO AND/OR INCLUDE: the involvement of naturopathic and homeopathic physicians.

[Comment] Furthermore- According to the Arizona Pharmacy Alliance, Medical Marijuana Position Statement: "***Until federal legislation changes the classification, marijuana is a Class-I controlled substance. It is illegal and a violation of federal law to possess.***" Further, "***AzPA strongly recommends that pharmacists do not get involved in the dispensing of the medical marijuana to avoid a felony conviction that could put their license at risk.***" **(enclosed).** It is our belief that this same problem and position regarding conflicting DEA, State and Federal Law will occur with a Designated Medical Director Physician (and/or Pharmacist) – State and Federal Medical License Violations.

R9-17-102. Fees

An applicant submitting an application to the Department shall submit the following nonrefundable fees: [Comment] – if denied, Application Fee should be **refundable** at early stage of License Approval, should be considered nonrefundable AFTER DHS has issued written notice of preliminary approval of the dispensary registration certificate that contains the dispensary's registry identification number, as in R9-17-107 (F) As there continues to be a lot of additional stages after this preliminary approval point to be completed by both Dispensary and DHS before Full Approval of a License.

1. **For registration of a dispensary, $5,000;**

2. **To renew the registration of a dispensary, $1,000;** [Comment] -- should be increased to $2,500 and considered a cost of doing business. Yearly Fixed Expense Not for Profit Organizations.

R9-17-107. Time-Frames

F. If the Department determines that an initial application for a dispensary registration is in compliance with A.R.S. Title 36, Chapter 28.1 and this Chapter, the Department shall provide a written notice of preliminary approval of the dispensary registration certificate that contains the dispensary's registry identification number

ARTICLE 2. QUALIFYING PATIENTS AND DESIGNATED CAREGIVERS

R9-17-201. Debilitating Medical Conditions [Comment] – Well Done.

An individual applying for a qualifying patient registry identification card shall have a diagnosis from a physician of at least one of the following conditions:

1. Cancer;
2. Glaucoma;
3. Human immunodeficiency virus;
4. Acquired immune deficiency syndrome;
5. Hepatitis C;
6. Amyotrophic lateral sclerosis;
7. Crohn's disease;
8. A chronic or debilitating disease or medical condition or the treatment for a chronic or debilitating disease or medical condition that causes cachexia or wasting syndrome;
9. A chronic or debilitating disease or medical condition or the treatment for a chronic or debilitating disease or medical condition that causes severe and chronic pain;
10. A chronic or debilitating disease or medical condition or the treatment for a chronic or debilitating disease or medical condition that causes severe nausea;
11. A chronic or debilitating disease or medical condition or the treatment for a chronic or debilitating disease or medical condition that causes seizures, including those characteristic of epilepsy;

12. A chronic or debilitating disease or medical condition or the treatment for a chronic or debilitating disease or medical condition that causes severe or persistent muscle spasms, including those characteristic of multiple sclerosis; or

13. A debilitating medical condition or treatment approved by the Department under A.R.S. § 36-2801.01 and R9-17-106

ARTICLE 3. DISPENSARIES [Comment] - All Good Points.

A **Each principal officer or board member of a dispensary is an Arizona resident and has been an Arizona resident for the two years immediately preceding the date the dispensary submits a dispensary certificate application.** [Comment]-GREAT POINT! Will Discourage and Eliminate out-of-state Franchises, out-of-state Investors, and absentee Dispensary Owners attempting to possibly take advantage of Arizona's Medical Marijuana Program.

B. (g) The name and **license number of the dispensary's medical director** [Comment]-Again, a possible Problem with a Designated Medical Director Physician (and/or Pharmacist) –conflicting DEA, State and Federal Medical Licensing Law.

4 Policies and procedures that comply with the requirements in this Chapter for:

a. Inventory control,
b. Qualifying patient recordkeeping,
c. Security, and
d. Patient education and support

5 A copy of the certificate of occupancy or other documentation issued by the local jurisdiction to the applicant authorizing occupancy of the building as a dispensary and, if applicable, as the dispensary's cultivation site

6 A sworn statement signed and dated by the individual or individuals in R9-17-301 certifying that the dispensary is in compliance with local zoning restrictions

7 The distance to the closest public or private school from:

a. The dispensary; and
b. If applicable, the dispensary's cultivation site

8 A site plan drawn to scale of the dispensary location showing streets, property lines, buildings, parking areas, outdoor areas if applicable, fences, security features, fire hydrants if applicable, and access to water mains

9 A floor plan drawn to scale of the building where the dispensary is located showing the:

a. Layout and dimensions of each room,
b. Name and function of each room,
c. Location of each hand washing sink,
d. Location of each toilet room,
e. Means of egress,
f. Location of each video camera,
g. Location of each panic button, and
h. Location of natural and artificial lighting sources

10 If applicable, a site plan drawn to scale of the dispensary's cultivation site showing streets, property lines, buildings, parking areas, outdoor areas if applicable, fences, security features, fire hydrants if applicable, and access to water mains

12 The dispensary's by-laws containing provisions for the disposition of revenues and receipts

13 A business plan demonstrating the on-going viability of the dispensary as a non-profit organization

14 The dispensary's hours of operation

15 Whether:

a. **A registered pharmacist will be onsite or on-call during regular business hours;**
[Comment]-Again, a possible Problem with a Designated Medical Director Physician (and/or Pharmacist) –conflicting DEA, State and Federal Medical Licensing Law.

b. The dispensary will provide information about the importance of physical activity and nutrition onsite;

c. Whether the dispensary has or has not incorporated; and

d. Whether the dispensary has a surety bond and, if so, how much

16 The applicable fee in R9-17-102 for applying for an initial registration of a dispensary

R9-17-306. Inspection [Comment] – Agreed.

A Submission of an application to register and certify a dispensary constitutes permission for entry to and inspection of the dispensary

R9-17-307. Administration [Comment] -Well Written.

A A dispensary shall:

1. Develop, document, and implement policies and procedures regarding:

a. Job descriptions and employment contracts, including personnel duties, authority, responsibilities, and qualifications; personnel supervision; training in and adherence to confidentiality requirements; periodic performance evaluations; and disciplinary actions;

b. Business records, including manual or computerized records of assets and liabilities, monetary transactions, journals, ledgers, and supporting documents, including agreements, checks, invoices, and vouchers;

c. Inventory control, including tracking, packaging, accepting marijuana from qualifying patients and designated caregivers, and disposing of unusable marijuana;

d. Qualifying patient records, including purchases, denial of sale, delivery options, if any, confidentiality, and retention;

e. Patient education and support, including availability of different strains of marijuana and the effects of the different strains, information about and effectiveness of various forms and routes of medical marijuana administration, methods of tracking the effects on a qualifying patient of

different strains and forms of marijuana, routes of administration of marijuana, and prohibition on the smoking of medical marijuana in public places

B Except as provided in subsection (C), a dispensary shall cultivate the medical marijuana dispensed by the dispensary in an enclosed, locked facility.

C A dispensary:

1. **Shall cultivate at least 70% of the medical marijuana the dispensary provides to qualifying patients or designated caregivers** [Comment] – 50% - 50% Split between Grown and Acquired;

2 Shall only provide medical marijuana cultivated or acquired by the dispensary to another dispensary in Arizona, a qualifying patient, or a designated caregiver authorized by A R S. Title 36, Chapter 28.1 and this Chapter to acquire medical marijuana;

3 May only acquire medical marijuana from another dispensary in Arizona, a qualifying patient, or a designated caregiver;

4 **May acquire up to 30% of the medical marijuana the dispensary provides to qualifying patients and designated caregivers from another dispensary in Arizona, a qualifying patient, or a designated caregiver** [Comment] – 50% - 50% Split between Grown and Acquired; and

5. **Shall not provide more than 30% of the medical marijuana cultivated by the dispensary to other dispensaries.** [Comment] – 50% - 50% Split between Grown and Acquired

[Comment] The Institute for Holistic Health and Healing: Daily Procedures and Inventory Control

Proper and Complete Record Keeping of Patient and Inventory is essential. A written Plan of Clear and Proper Procedure from the moment a patient walks in through the door, and a plan for how to assist them until they walk back out the door [and, within the parking lot]. Daily business Forms and Documents, along with a DHS Data Management System must be constantly maintained and strictly enforced. Patient and Employee sign-in sheets, clear transaction records, and other daily necessities. **Dispensary Floor Plan and Security Design:** A Secure and HIPPA sensitive patient environment, promoting Effective and Safe Patient Care Within a professional atmosphere, gated, well lit and fenced parking lot, with a 24/7 Security Staff on premises at all times

R9-17-310. Medical Director [Comment] Same as R9-17-101 'Medical Dirrector'

A A medical director may only serve as a medical director for three dispensaries at any time

B During hours of operation, a medical director is:

1 On-site, or

2 Able to be contacted by any means possible, such as by telephone or pager;

C A medical director shall provide oversight for the development and dissemination of:

1 Educational materials for qualifying patients and designated caregivers that include:

a. Alternative medical options for the qualifying patient's debilitating medical condition;

b Information about possible side effects of and contraindications for medical marijuana including possible impairment with use and operation of a motor vehicle or heavy machinery, when caring for children, or of job performance;

c Guidelines for notifying a recommending physician if side effects or contraindications occur;

d. A description of the potential for differing strengths of medical marijuana strains and products;

e. Information about potential drug-drug interactions, including interactions with alcohol, prescription drugs, non-prescription drugs, and supplements;

f. Safe techniques for the use of medical marijuana and marijuana paraphernalia;

g. Different methods and forms of medical marijuana use;

h Signs and symptoms of substance abuse, including tolerance, dependency, and withdrawal; and

i A listing of substance abuse programs and referral information

D **A medical director shall not establish a physician-patient relationship with or write medical marijuana recommendations for a qualifying patient** [Comment] - additional complication, Medical Director – Implied Physician/Pharmacist-patient relationship and Liability Issues. According to the Arizona Pharmacy Alliance, Medical Marijuana Position Statement: "***Until federal legislation changes the classification, marijuana is a Class-I controlled substance. It is illegal and a violation of federal law to possess.***" Further, "***AzPA strongly recommends that pharmacists do not get involved in the dispensing of the medical marijuana to avoid a felony conviction that could put their license at risk.***" **(enclosed).** It is our belief that this same problem and position regarding conflicting DEA, State and Federal Law will occur with a Designated Medical Director Physician and/or Pharmacist – State and Federal Medical License Violations.

R9-17-311. Dispensing Medical Marijuana [Comment] - Section Done Well

[Comment] The Institute for Holistic Health and Healing: Patient Rights

- **Choice of Providers:** You have the right to accurate and easily understood information about the laws and local regulations.

- **Accuracy and Control:** You have the right to accurately labeled and weighed quality medication and accurate information about the medication being provided.
- **Safety:** You have the right to obtain your medication in a safe, secure and friendly environment.
- **Respect and Non-Discrimination:** You have the right to considerate, respectful, and non-discriminatory care.
- **Confidentiality of Health Information:** You have the right to talk in confidence with your providers, and to have your health care information protected under all appropriate safety provisions.

R9-17-312. Qualifying Patient Records [Comment] - Section Done Well

R9-17-313. Inventory Control

A A dispensary shall designate in writing a dispensary agent who has oversight of the dispensary's medical marijuana inventory control system

B A dispensary shall establish and implement an inventory control system for the dispensary's medical marijuana that documents:

1 Each day's beginning inventory, acquisitions, harvests, sales, disbursements, disposal of unusable marijuana, and ending inventory;

2 For acquiring medical marijuana from a qualifying patient, designated caregiver, or another dispensary:

a. A description of the medical marijuana acquired including the amount and strain;
b The name and registry identification number of the qualifying patient, designated caregiver, or dispensary and dispensary agent who provided the medical marijuana;
c The name and registry identification number of the dispensary agent receiving the medical marijuana on behalf of the dispensary; and
d. The date of acquisition;

3 For cultivation:

a. The strain of marijuana seed planted, **type of soil used [Problem – Change to Growing Medium]**, date seeds were planted, and the watering schedule;

[Comment] Type of Soil – MUST ALSO INCLUDE HYDROPONICS AND AEROPONICS. Change to: GROWING MEDIUM USED! The word **"hydroponics"** comes from the Greek "hydros" (water) and "ponos" (labor), and refers to the method of plant cultivation achieved without the use of soils. In traditional cultivation, the soil acts as a water reservoir (and therefore a nutrient

reservoir) that feeds the plant roots. The soil is basically a medium that delivers mineral nutrients, dissolved in water stores, to the plant roots. In actuality, the soil itself is not necessary, so long as a nutrient-rich water source is supplied to the plant roots. In very basic terms, hydroponics eliminates the soil completely, and supplies nutrient-rich water directly to the plant roots. It's a rather simple concept, but the applications and versatility of hydroponics are astonishing, when compared to traditional cultivation. 'Environmentally friendly' has become a mantra amongst those wanting to preserve our planet and stop the exploitation of the very land we depend upon. This trend to protect and sustain our fragile planet is one that will continue to grow in the future. The movement towards a more health conscious society is on the rise, providing an unmeasured opportunity for hydroponics and organic gardening.

b Harvest information including:
i Date of harvest;
ii. Amount of medical marijuana harvested, including the amount of marijuana and the amount of usable marijuana;
iii. Name and registry identification number of the dispensary agent responsible for the harvest; and

c The disposal of medical marijuana that is not usable marijuana including the:
i. Date of disposal,
ii. Method of disposal, and
iii. Name and registry identification number of the dispensary agent responsible for the disposal;

4 For providing medical marijuana to another dispensary:
a. The amount and strain of medical marijuana provided,
b. The name and registry identification number of the other dispensary,
c. The name and registry identification number of the dispensary agent who received the medical marijuana on behalf of the other dispensary, and
d The date the medical marijuana was provided;

5 For providing medical marijuana to a food establishment for infusion into an edible food product:
a A description of the medical marijuana provided including the amount and strain;
b The name and registry identification number of the designated agent who:
i. Provided the medical marijuana to the food establishment on behalf of the dispensary, and
ii Received the medical marijuana on behalf of the food establishment; and
c. The date the medical marijuana was provided to the food establishment; and

6 For receiving edible food products infused with medical marijuana from a food establishment:
a. The date the medical marijuana used to infuse the edible food products was received by the food establishment and the amount of medical marijuana received;
b. A description of the edible food products received from the food establishment, including total weight of each edible food product and estimated amount of medical marijuana infused in each edible food product;

c. Total estimated amount of medical marijuana infused in edible food products;
d. A description of any reduction in the amount of medical marijuana;
e. For any unusable marijuana disposed of at the food establishment:
    i. A description of the unusable marijuana,
    ii. The amount of unusable marijuana disposed of,
    iii. Date of disposal,
    iv. Method of disposal,

[Comment] The Institute for Holistic Health and Healing: Growing & Plant Tracking

Each Plant will be numbered and tracked [daily log] from Seed to Mature Plant. Seed Strain, Hydroponic Growing Information, and Mature Plant Yield will be accurately and constantly measured, as Growing Cycles will be documented from seedling to harvest.

R9-17-314. Product Labeling and Analysis [Comment] – Well Written

A. A dispensary shall ensure that medical marijuana provided by the dispensary to a qualifying patient or a designated caregiver is labeled with:
    1. The dispensary's registry identification number;
    2. The amount and strain of medical marijuana;
    3. If not cultivated by the dispensary, whether the medical marijuana was obtained from a qualifying patient, a designated caregiver, or another dispensary;
    4. The date of manufacture, harvest, or sale;
    5. A list of all chemical additives, including nonorganic pesticides, herbicides, and fertilizers, used in the cultivation and production of the medical marijuana; and
    6. The registry identification number of the qualifying patient

B. If medical marijuana is provided as part of an edible food product, a dispensary shall, in addition to the information in subsection (A), include on the label:
    1. The total weight of the edible food product; and
    2. The following statement "This product is infused with medical marijuana and was produced without regulatory oversight for health, safety, or efficacy. There may be health risks associated with the consumption of the product."

C. A dispensary shall provide to the Department upon request a sample of the dispensary's medical marijuana inventory of sufficient quantity to enable the Department to conduct an analysis of the medical marijuana.

[Comment] The Institute for Holistic Health and Healing: Research, Grading & Testing

Our mission will be to provide a safe environment for medical marijuana patients through increased product knowledge and testing. The potential hazards of inhaling unregulated marijuana must be recognized. The Institute for Holistic Health and Wellness will send out a sample of *all* our products (Grown and/or Acquired), to be tested by an independent third-party screening. A independent company that accurately measures the potency of Medicinal Cannabis through the use of its gas chromatography coupled with a mass-spectrometer(GC/MS) and flame ionization detector (GC/FID). This means that our organization and patients' can know exactly how much **THC**, **CBN**, and **CBD** chemicals are in each dose. This will increase the patients' ability to effectively identify the best medication for their personal condition and preference. Additionally, we will be screening for any molds and/or pesticides.

R9-17-315. Security [Comment] Very Well Written

A A dispensary shall ensure that access to the enclosed, locked facility where marijuana is cultivated is limited to principal officers, board members, and designated agents of the dispensary

B A dispensary may transport marijuana in any form, marijuana plants, and marijuana paraphernalia between the dispensary and:

1. The dispensary's cultivation site,
2. A qualifying patient,
3. Another dispensary, and
4. A food establishment contracted with the dispensary to prepare edible food products infused with medical marijuana.

C To prevent unauthorized access to medical marijuana at the dispensary and, if applicable, the dispensary's cultivation site, the dispensary shall have the following:

1. Security equipment to deter and prevent unauthorized entrance into limited access areas that include:
    a. Devices or a series of devices to detect unauthorized intrusion, which may include a signal system interconnected with a radio frequency method, such as cellular, private radio signals, or other mechanical or electronic device;
    b. Exterior lighting to facilitate surveillance;
    c. Electronic monitoring including:
        i. At least one 19 inch or greater call-up monitor;
        ii. A video printer capable of immediately producing a clear still photo from any video camera image;
        iii. Video cameras:

(1) Providing coverage of all entrances to and exits from limited access areas and all entrances to and exits from the building, capable of identifying any activity occurring in or adjacent to the building; and
(2) Have a recording resolution of least at 704 x 480 or the equivalent;

iv. A video camera at each point of sale location allowing for the identification of any qualifying patient or designated caregiver purchasing medical marijuana;
v. A video camera in each grow room capable of identifying any activity occurring within the grow room in low light conditions;
vi. Storage of video recordings from the video cameras for at least 30 calendar days;
vii. A failure notification system that provides an audible and visual notification of any failure in the electronic monitoring system;
viii. Video cameras and recording equipment with sufficient battery backup to support at least five minutes of recording in the event of a power outage; and
ix. The capability of providing authorized remote viewing of live and recorded video with:

(1) Internet connectivity of at least 384 kbps upstream; and
(2) A static IP address to allow for remote connection;

d. Panic buttons in the interior of each building; and

2. Policies and procedures:

a. That restrict access to the areas of the dispensary that contain marijuana and if applicable, the dispensary's cultivation site, to authorized individuals only;
b. That provide for the identification of authorized individuals;
c. That prevent loitering;
d. For conducting electronic monitoring; and
e. For the use of a panic button

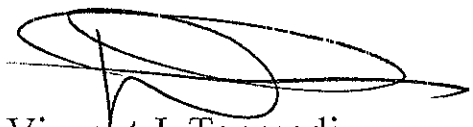
[Comment] The Institute for Holistic Health and Healing: Security & Safety

- 24-hour Security Service [during business hours, and non-business hours] Armed Guards;
- Steel Doors and/or Grates [on all doors and windows];
- Video Surveillance [Inside and outside Building];
- Safe and/or Safe Room;
- Burglar Alarm System;
- Insurance;
- HIPAA Office Design and Patient Environment
- Opening and Closing Routines;
- Metal Detectors at Doors;

- Medical Marijuana Card Scanner;
- Cash Management System & Inventory Control System;
- Safe Patient and Employee Environment;
- Effective and Safe Patient Access and Care.

Thank you for your time and consideration regarding; the opportunity and the ability for us to include our Comments and Suggestions for the Arizona Medical Marijuana Program.

Sincerely and Respectfully,



Vincent J. Tancredi

The Institute for Holistic
Health and Healing

AzPA
ARIZONA PHARMACY ALLIANCE

1845 E Southern Avenue, Tempe, AZ 85282 (480) 838-3385

AzPA Medical Marijuana Position Statement

Pharmacists are proven experts in medication therapy management. To ensure optimal treatment outcomes, it is critical that medication therapy management includes a review of all medications and all health conditions.

AzPA strongly opposes any law which bypasses the normal approval and distribution process for medications including the normal chains of custody for drug distribution and licensed pharmacies. Since the new Arizona law allows for marijuana use for medical purposes, it should be treated as a medication/drug.

To best support the safe distribution and use of medical marijuana, AzPA supports changes to federal legislation that would re-classify marijuana from a C-I to C-II. The change would allow the distribution of medical marijuana through licensed pharmacies. AzPA commits to raise this issue with national pharmacy organizations and AZ Congressional delegation. Until federal legislation changes the classification, marijuana is a Class-I controlled substance. It is illegal and a violation of federal law to possess.

AzPA strongly recommends that pharmacists do not get involved in the dispensing of the medical marijuana to avoid a felony conviction that could put their license at risk.

Recommendations:

1. AzPA recommends that licensed users of medical marijuana be identified in a database that is accessible to health care professionals. This will give health care professionals an added resource to facilitate safer treatment options. AzPA would also support changing Arizona law to require that C-I medications are reported into the ASBP prescription monitoring program.

2. AzPA recommends that the state implement post marketing surveillance through pharmacists at the Arizona Poison and Drug Information Center at the University of Arizona to track adverse drug events and monitor quality, safety and efficacy.

3. AzPA recommends only dispensaries that have policy and procedures focused on patient safety and quality assurance standards focused on product quality and accurate dosing be granted a dispensary license. Policies and procedures must include a mechanism to assess the impact medical marijuana use will have on the patient's other medical conditions as well as the safety, pharmacokinetics, and efficacy of their other medications.

Hydroponics

From Wikipedia, the free encyclopedia

For the Soup Dragons album, see Hydrophonic.

Hydroponics (From the Greek words *hydro*, water and *ponos*, labor) is a method of growing plants using mineral nutrient solutions, in water, without soil. Terrestrial plants may be grown with their roots in the mineral nutrient solution only or in an inert medium, such as perlite, gravel, mineral wool, or coconut husk.

NASA researcher checking hydroponic onions with Bibb lettuce to his left and radishes to the right

Researchers discovered in the 19th century that plants absorb essential mineral nutrients as inorganic ions in water. In natural conditions, soil acts as a mineral nutrient reservoir but the soil itself is not essential to plant growth. When the mineral nutrients in the soil dissolve in water, plant roots are able to absorb them. When the required mineral nutrients are introduced into a plant's water supply artificially, soil is no longer required for the plant to thrive. Almost any terrestrial plant will grow with hydroponics. Hydroponics is also a standard technique in biology research and teaching.

Contents

History

The earliest published work on growing terrestrial plants without soil was the 1627 book, *Sylva Sylvarum* by Sir Francis Bacon, printed a year after his death. Water culture became a popular research technique after that. In 1699, John Woodward published his water culture experiments with spearmint. He found that plants in less pure water sources grew better than plants in distilled water. By 1842 a list of nine elements believed to be essential to plant growth had been made out, and the discoveries of the German botanists, Julius von Sachs and Wilhelm Knop, in the years 1859-65, resulted in a development of the technique of soilless cultivation.[1] Growth of terrestrial plants without soil in mineral nutrient solutions was called solution culture. It quickly became a standard research and teaching technique and is still widely used today. Solution culture is now considered a type of hydroponics where there is no inert medium

In 1929, Professor William Frederick Gericke of the University of California at Berkeley began publicly promoting that solution culture be used for agricultural crop production.[2] He first termed it aquaculture but later found that aquaculture was already applied to culture of aquatic organisms. Gericke created a sensation by growing tomato vines twenty-five feet high in his back yard in mineral nutrient solutions rather than soil [3] By analogy with the ancient Greek term for agriculture, geoponics, the science of cultivating the earth, Gericke introduced the term *hydroponics* in 1937 (although he asserts that the term was suggested by Dr. W. A. Setchell, of the University of California) for the culture of plants in water (from the Greek *hydros*, "water", and *ponos*, "labor").[1]

Reports of Gericke's work and his claims that hydroponics would revolutionize plant agriculture prompted a huge number of requests for further information. Gericke refused to reveal his secrets claiming he had done the work at home on his own time. This refusal eventually resulted in his leaving the University of California. In 1940, he wrote the book, *Complete Guide to Soilless Gardening*

Two other plant nutritionists at the University of California were asked to research Gericke's claims. Dennis R. Hoagland (http://pmb.berkeley.edu/newpmb/faculty/hoagland/NAS_Memoir.pdf) and Daniel I. Arnon (http://pmb.berkeley.edu/newpmb/faculty/deceased.shtml) wrote a classic 1938 agricultural bulletin, *The Water Culture Method for Growing Plants Without Soil,*[4] debunking the exaggerated claims made about hydroponics. Hoagland and Arnon found that hydroponic crop yields were no better than crop yields with good quality soils. Crop yields were ultimately limited by factors other than mineral nutrients, especially light. This research, however, overlooked the fact that hydroponics has other advantages including the fact that the roots of the plant have constant access to oxygen and that the

plants have access to as much or as little water as they need. This is important as one of the most common errors when growing is over- and under- watering; and hydroponics prevents this from occurring as large amounts of water can be made available to the plant and any water not used, drained away, recirculated, or actively aerated, eliminating anoxic conditions which drown root systems in soil. In soil, a grower needs to be very experienced to know exactly how much water to feed the plant. Too much and the plant will not be able to access oxygen; too little and the plant will lose the ability to transport nutrients, which are typically moved into the roots while in solution.

These two researchers developed several formulas for mineral nutrient solutions, known as Hoagland solution. Modified Hoagland solutions are still used today.

One of the early successes of hydroponics occurred on Wake Island, a rocky atoll in the Pacific Ocean used as a refueling stop for Pan American Airlines. Hydroponics was used there in the 1930s to grow vegetables for the passengers. Hydroponics was a necessity on Wake Island because there was no soil, and it was prohibitively expensive to airlift in fresh vegetables.

In the 1960s, Allen Cooper of England developed the Nutrient film technique. The Land Pavilion at Walt Disney World's EPCOT Center opened in 1982 and prominently features a variety of hydroponic techniques. In recent decades, NASA has done extensive hydroponic research for their Controlled Ecological Life Support System or CELSS. Hydroponics intended to take place on Mars are using LED lighting to grow in different color spectrum with much less heat.

In 1978, hydroponics pioneer Dr. Howard Resh published the first edition of his book "Hydroponics Food Production." This book (now updated) spurred what has become known as the 3-part base nutrients formula that is still a major component of today's hydroponics gardening. Resh later went on to publish other books, and is currently in charge of a highly advanced hydroponics research and production facility in the Caribbean.

In the last few years, the popularity in the hydroponics marketplace has increased rapidly.[5]

Origin

Soilless culture

Gericke originally defined hydroponics as crop growth in mineral nutrient solutions, with no solid medium for the roots. He objected in print to people who applied the term hydroponics to other types of soilless culture such as sand culture and gravel culture. The distinction between hydroponics and soilless culture of plants has often been blurred. Soilless culture is a broader term than hydroponics; it only requires that no soils with clay or silt are used. Note that sand is a type of soil yet sand culture is considered a type of soilless culture. Hydroponics is a subset of soilless culture. Many types of soilless culture do not use the mineral nutrient solutions required for hydroponics.

Billions of container plants are produced annually, including fruit, shade and ornamental trees, shrubs, forest seedlings, vegetable seedlings, bedding plants, herbaceous perennials and vines. Most container plants are produced in soilless media, representing soilless culture. However, most are not hydroponics because the soilless medium often provides some of the mineral nutrients via slow release fertilizers, cation exchange and decomposition of the organic medium itself. Most soilless media for container plants also contain organic materials such as peat or composted bark, which provide some nitrogen to the plant. Greenhouse growth of plants in peat bags is often termed hydroponics, but technically it is not because the medium provides some of the mineral nutrients.

Plants that are not traditionally grown in a climate would be possible to grow using a controlled environment system like hydroponics. During World War II produce was grown with hydroponics on the barren Pacific Islands. According to a 1938 Times magazine article, this was one of the first times that commercial use of hydroponics was used on such a large scale to feed people. This group of islands was used as a refueling stop for Pan-Am Airways and the food was used to feed the staff and crew. This means that salad greens could possibly be grown in Antarctica or even the Mojave Desert. NASA has also looked to utilize hydroponics in the space program. Ray Wheeler, plant physiologist at Kennedy Space Center's Space Life Science Lab, believes that hydroponics will create advances within space travel. He terms this as "a life support system with the biological component of growing plants—called a bioregenerative life support system. It has several benefits for NASA." These Scientists are researching how different amounts of light, temperature and carbon dioxide, along with plant species can be grown and cultivated on planets like Mars.

Advantages

Some of the reasons why hydroponics is being adapted around the world for food production are the following:

- No soil is needed
- The water stays in the system and can be reused- thus, lower water costs
- It is possible to control the nutrition levels in their entirety- thus, lower nutrition costs
- No nutrition pollution is released into the environment because of the controlled system
- Stable and high yields
- Pests and diseases are easier to get rid of than in soil because of the container's mobility

Today, hydroponics is an established branch of agronomy. Progress has been rapid, and results obtained in various countries have proved it to be thoroughly practical and to have very definite advantages over conventional methods of horticulture. The two chief merits of the soil-less cultivation of plants are, first, much higher crop yields, and second, hydroponics can be used in places where in-ground agriculture or gardening is not possible.

Disadvantages

The hydroponic conditions (presence of fertilizer and high humidity) create an environment that stimulates salmonella growth.[6] Other disadvantages include pathogen attacks such as damp-off due to Verticillium wilt caused by the high moisture levels associated with hydroponics and overwatering of soil based plants. Also, many hydroponic plants require different fertilizers and containment systems.[7]

Techniques

The two main types of hydroponics are solution culture and medium culture. Solution culture does not use a solid medium for the roots, just the nutrient solution. The three main types of solution culture are static solution culture, continuous flow solution culture and aeroponics. The medium culture method has a solid medium for the roots and is named for the type of medium, e.g. sand culture, gravel culture or rockwool culture. There are two main variations for each medium, subirrigation and top irrigation. For all techniques, most hydroponic reservoirs are now built of plastic but other materials have been used including concrete, glass, metal, vegetable solids and wood. The containers should exclude light to prevent algae growth in the nutrient solution.

Static solution culture

In static solution culture, plants are grown in containers of nutrient solution, such as glass Mason jars (typically in-home applications), plastic buckets, tubs or tanks. The solution is usually gently aerated but may be unaerated. If unaerated, the solution level is kept low enough that enough roots are above the solution so they get adequate oxygen. A hole is cut in the lid of the reservoir for each plant. There can be one to many plants per reservoir. Reservoir size can be increased as plant size increases. A homemade system can be constructed from plastic food containers or glass canning jars with aeration provided by an aquarium pump, aquarium airline tubing and aquarium valves. Clear containers are covered with aluminium foil, butcher paper, black plastic or other material to exclude light, thus helping to eliminate the formation of algae. The nutrient solution is either changed on a schedule, such as once per week, or when the concentration drops below a certain level as determined with an electrical conductivity meter. Whenever the solution is depleted below a certain level, either water or fresh nutrient solution is added, A Mariotte's bottle, or a float valve, can be used to automatically maintain the solution level. In raft solution culture, plants are placed in a sheet of buoyant plastic that is floated on the surface of the nutrient solution. That way, the solution level never drops below the roots.

Continuous flow solution culture

In continuous flow solution culture the nutrient solution constantly flows past the roots. It is much easier to automate than the static solution culture because sampling and adjustments to the temperature and nutrient concentrations can be made in a large storage tank that serves potentially thousands of plants. A popular variation is the nutrient film technique or NFT whereby a very shallow stream of water containing all the dissolved nutrients required for plant growth is recirculated past the bare roots of plants in a watertight thick root mat, which develops in the bottom of the channel, has an upper surface which, although moist, is in the air. Subsequently, there is an abundant supply of oxygen to the roots of the plants. A properly designed NFT system is based on using the right channel slope, the right flow rate and the right channel length. The main advantage of the NFT system over other forms of hydroponics is that the plant roots are exposed to adequate supplies of water, oxygen and nutrients. In all other forms of production there is a conflict between the supply of these requirements, since excessive or deficient amounts of one results in an imbalance of one or both of the others. NFT, because of its design, provides a system where all three requirements for healthy plant growth can be met at the same time, providing the simple concept of NFT is always remembered and practised. The result of these advantages is that higher yields of high quality produce are obtained over an extended period of cropping. A downside of NFT is that it has very little buffering against interruptions in the flow e.g. power outages, but overall, it is probably one of the more productive techniques

The same design characteristics apply to all conventional NFT systems. While slopes along channels of 1:100 have been recommended, in practice it is difficult to build a base for channels that is sufficiently true to enable nutrient films to flow without ponding in locally depressed areas. Consequently, it is recommended that slopes of 1:30 to 1:40 are used. This allows for minor irregularities in the surface but, even with these slopes, ponding and waterlogging may occur. The slope may be provided by the floor, or benches or racks may hold the channels and provide the required slope. Both methods are used and depend on local requirements, often determined by the site and crop requirements.

As a general guide, flow rates for each gully should be 1 liter per minute. At planting, rates may be half this and the upper limit of 2L/min appears about the maximum. Flow rates beyond these extremes are often associated with nutritional problems. Depressed growth rates of many crops have been observed when channels exceed 12 metres in length. On rapidly growing crops, tests have indicated that, while oxygen levels remain adequate, nitrogen may be depleted over the length of the gully. Consequently,

channel length should not exceed 10–15 metres. In situations where this is not possible, the reductions in growth can be eliminated by placing another nutrient feed half way along the gully and reducing flow rates to 1L/min through each outlet.

Aeroponics

Main article: Aeroponics

Aeroponics is a system where roots are continuously or discontinuously kept in an environment saturated with fine drops (a mist or aerosol) of nutrient solution. The method requires no substrate and entails growing plants with their roots suspended in a deep air or growth chamber with the roots periodically wetted with a fine mist of atomized nutrients. Excellent aeration is the main advantage of aeroponics.

Aeroponic techniques have proved to be commercially successful for propagation, seed germination, seed potato production, tomato production, leaf crops and micro-greens.[8] Since inventor Richard Stoner commercialized aeroponic technology in 1983, aeroponics has been implemented as an alternative to water intensive hydroponic systems worldwide.[9] The limitation of hydroponics is the fact that 1 kg of water can only hold 8 mg of air, no matter if aerators are utilized or not.

Another distinct advantage of aeroponics over hydroponics is that any species of plants can be grown in a true aeroponic system because the micro environment of an aeroponic can be finely controlled. The limitation of hydroponics is that only certain species of plants can survive for so long in water before they become water logged. The advantage of aeroponics is due to the fact that suspended aeroponic plants receive 100% of the available oxygen and carbon dioxide to the roots zone, stems and leaves,[10] thus accelerating biomass growth and reducing rooting times. NASA research has shown that aeroponically grown plants have an 80% increase in dry weight biomass (essential minerals) compared to hydroponically grown plants. Aeroponics used 65% less water than hydroponics. NASA also concluded that aeroponically grown plants requires ¼ the nutrient input compared to hydroponics. Unlike hydroponically grown plants, aeroponically grown plants will not suffer transplant shock when transplanted to soil, and offers growers the ability to reduce the spread of disease and pathogens.[11] Aeroponics is also widely used in laboratory studies of plant physiology and plant pathology. Aeroponic techniques have been given special attention from NASA since a mist is easier to handle than a liquid in a zero gravity environment.

Passive subirrigation

Main article: Passive hydroponics

Passive subirrigation, also known as passive hydroponics or semi-hydroponics, is a method where plants are grown in an inert porous medium that transports water and fertilizer to the roots by capillary action from a separate reservoir as necessary, reducing labor and providing a constant supply of water to the roots. In the simplest method, the pot sits in a shallow solution of fertilizer and water or on a capillary mat saturated with nutrient solution. The various hydroponic media available, such as expanded clay and coconut husk, contain more air space than more traditional potting mixes, delivering increased oxygen to the roots, which is important in epiphytic plants such as orchids and bromeliads, whose roots are exposed to the air in nature. Additional advantages of passive hydroponics are the reduction of root rot and the additional ambient humidity provided through evaporations.

Ebb and flow / Flood and drain subirrigation

Main article: Ebb and flow

In its simplest form, there is a tray above a reservoir of nutrient solution. The tray is either filled with growing medium (clay granules being the most common) and planted directly, or pots of medium stand in the tray. At regular intervals, a simple timer causes a pump to fill the upper tray with nutrient solution, after which the solution drains back down into the reservoir. This keeps the medium regularly flushed with nutrients and air. Once the upper tray fills past the drain stop it begins recirculating the water until the pump is turned off and the water in the upper tray drains back into the reservoirs.

Run to Waste

In a Run to Waste type system, nutrient and water solution is periodically applied to the medium surface. This may be done in its simplest form, by manually applying a nutrient and water solution one or more times per day in a container of inert growing media, such as rockwool, perlite, vermiculite, coco fibre, or sand. In a slightly more complex system, it is automated with a delivery pump, a timer and irrigation tubing to deliver nutrient solution with a delivery frequency that is governed by the key parameters of plant size, plant growing stage, climate, substrate, and substrate conductivity, pH, and water content.

In a commercial setting, watering frequency is multi factorial and governed by pc or plc based controllers.

Commercial hydroponics production of large plants like tomatoes, cucumber and peppers, use one form or another of run to waste hydroponics

In environmentally responsible uses, the nutrient rich waste is collected and processed through an on site filtration system to be used many times, making the system very productive.[12][13]

Deep water culture

Main article: Deep water culture

The hydroponic method of plant production by means of suspending the plant roots in a solution of nutrient rich, oxygenated water. Traditional methods favor the use of plastic buckets and large containers with the plant contained in a net pot suspended from the centre of the lid and the roots suspended in the nutrient solution. The solution is super oxygenated from an air pump combined with porous stones. With this method the plants grow much faster because of the high amount of oxygen that the roots receive.[14]

Bubbleponics

"Bubbleponics" is the art of delivering highly oxygenated nutrient solution direct to the root zone of plants. While Deep Water Culture involves the plant roots hanging down into a reservoir of water below, the term Bubbleponics describes a top-fed Deep Water Culture (DWC) hydroponic system. Basically, the water is pumped from the reservoir up to the roots (top feeding). The water is released over the plant's roots and then runs back into the reservoir below in a constantly recirculating system. As with

Deep Water Culture, there is an airstone in the reservoir which pumps air into the water via a hose from outside the reservoir. The airstone helps add oxygen to the water. Both the airstone and the water pump run 24 hours a day.

The biggest advantages with Bubbleponics over Deep Water Culture involve increased growth during the first few weeks. With Deep Water Culture, there is a time where the roots haven't reached the water yet. With Bubbleponics, the roots get easy access to water from the beginning and will grow to the reservoir below much more quickly than with a Deep Water Culture system. Once the roots have reached the reservoir below, there is not a huge advantage with Bubbleponics over Deep Water Culture. However, due to the quicker growth in the beginning, a few weeks of grow time can be shaved off [15]

Media

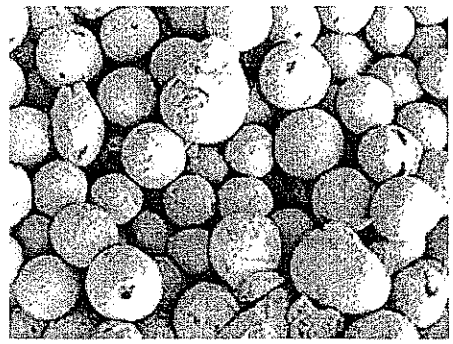
One of the most obvious decisions hydroponic farmers have to make is which medium they should use Different media are appropriate for different growing techniques

Diahydro

Sedimentary rock medium that consists of the fossilized remains of diatoms. Diahydro is extremely high in Silica (87-94%), an essential component for the growth of plants and strengthening of cell walls.

Expanded clay (Ex-clay)

Baked clay pellets, also known under the trademarks 'Hydroton' or 'Hydrokorrels' or 'LECA' (lightweight expanded clay aggregate), are suitable for hydroponic systems in which all nutrients are carefully controlled in water solution The clay pellets are inert, pH neutral and do not contain any nutrient value.



Hydroton brand expanded clay pebbles.

The clay is formed into round pellets and fired in rotary kilns at 1,200 °C (2,190 °F). This causes the clay to expand, like popcorn, and become porous It is light in weight, and does not compact over time. Shape of individual pellet can be irregular or uniform depending on brand and manufacturing process The manufacturers consider expanded clay to be an ecologically sustainable and re-usable growing medium because of its ability to be cleaned and sterilized, typically by washing in solutions of white vinegar, chlorine bleach or hydrogen peroxide (H_2O_2), and rinsing completely

A less popular view is that clay pebbles are best not re-used even when they are cleaned, due to root growth which may enter the medium. Breaking open a clay pebble after a crop has been grown will reveal this growth

Rock wool

Rock wool (mineral wool) is probably the most widely used medium in hydroponics. Rock Wool is an inert substrate for both 'free drainage' and recirculating systems. It is made from molten rock spun into cotton candy-like fibers, resulting in a fibrous medium accessible to capillary action that is not degraded

by microbiological activity Advantages are that rock wool is light weight, free of pathogens, it has very low CEC (Cations exchange capacity) making nutrients and water readily available, and it comes in different fiber sizes and orientations. Higher density rock wool also improves the wicking and dispersion of moisture and nutrients, enticing roots into more areas of the medium, and therefore increasing nutrient fueled sites for premium plant production. After usage, rock wool can be recycled into bricks or into new rock wool again, and or incorporated into soil because it is made of natural rocks and contains great amount of fertilizer left within it.

Coir

Coco Peat, also known as coir or coco, is the leftover material after the fibres have been removed from the outermost shell (bolster) of the coconut Coir is a 100% natural grow and flowering medium. Coconut Coir is colonized with trichoderma bacteria which protects roots and stimulates root growth It is extremely difficult to over water coir due to its perfect air to water ratio, plant roots thrive in this environment, coir has a high cation exchange, meaning it can store unused minerals to be released to the plant as and when it requires it. Coir is available in many forms, most common is coco peat which has the appearance and texture of soil but contains no mineral content.

Perlite

Perlite is a volcanic rock that has been superheated into very lightweight expanded glass pebbles It is used loose or in plastic sleeves immersed in the water. It is also used in potting soil mixes to decrease soil density. Perlite has similar properties and uses to vermiculite but generally holds more air and less water. If not contained, it can float if flood and drain feeding is used. It is a fusion of granite, obsidian, pumice and basalt. This volcanic rock is naturally fused at high temperatures undergoing what is called **"Fusionic Metamorphosis"**.

Vermiculite

Like perlite, vermiculite is another mineral that has been superheated until it has expanded into light pebbles. Vermiculite holds more water than perlite and has a natural "wicking" property that can draw water and nutrients in a passive hydroponic system. If too much water and not enough air surrounds the plants roots, it's possible to gradually lower the medium's water-retention capability by mixing in increasing quantities of perlite.

Sand

Sand is cheap and easily available. However, it is heavy, does not hold water very well, and it must be sterilized between use.

Gravel

The same type that is used in aquariums, though any small gravel can be used, provided it is washed first. Indeed, plants growing in a typical traditional gravel filter bed, with water circulated using electric powerhead pumps, are in effect being grown using gravel hydroponics. Gravel is inexpensive, easy to keep clean, drains well and won't become waterlogged. However, it is also heavy, and if the system doesn't provide continuous water, the plant roots may dry out.

Brick shards

Brick shards have similar properties to gravel. They have the added disadvantages of possibly altering the pH and requiring extra cleaning before reuse

Polystyrene packing peanuts

Polystyrene packing peanuts are inexpensive, readily available, and have excellent drainage. However, they can be too lightweight for some uses. They are mainly used in closed tube systems. Note that polystyrene peanuts must be used; biodegradable packing peanuts will decompose into a sludge. Plants may absorb styrene and pass it to their consumers; this is a possible health risk.

Wood fiber

Wood fiber, produced from steam friction of wood, is a very efficient organic substrate for hydroponics. It has the advantage that it keeps its structure for a very long time.

Nutrient solutions

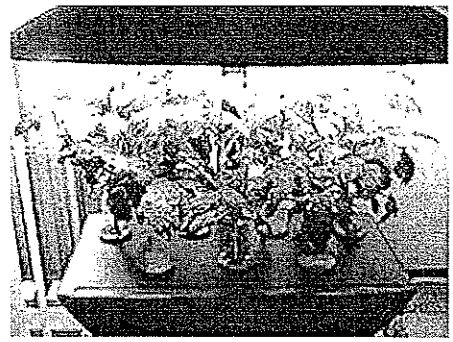
Plant nutrients used in hydroponics are dissolved in the water and are mostly in inorganic and ionic form. Primary among the dissolved cations (positively charged ions) are Ca^{2+} (calcium), Mg^{2+} (magnesium), and K^+ (potassium); the major nutrient anions in nutrient solutions are NO_3^- (nitrate), SO_4^{2-} (sulfate), and $H_2PO_4^-$ (dihydrogen phosphate)

Numerous 'recipes' for hydroponic solutions are available. Many use different combinations of chemicals to reach similar total final compositions. Commonly used chemicals for the macronutrients include potassium nitrate, calcium nitrate, potassium phosphate, and magnesium sulfate. Various micronutrients are typically added to hydroponic solutions to supply essential elements; among them are Fe (iron), Mn (manganese), Cu (copper), Zn (zinc), B (boron), Cl (chlorine), and Ni (nickel). Chelating agents are sometimes used to keep Fe soluble. Many variations of the nutrient solutions used by Arnon and Hoagland (see above) have been styled 'modified Hoagland solutions' and are widely used. Variation of different mixes throughout the plant life cycle, further optimizes its nutritional value [16] Plants will change the composition of the nutrient solutions upon contact by depleting specific nutrients more rapidly than others, removing water from the solution, and altering the pH by excretion of either acidity or alkalinity.[17] Care is required not to allow salt concentrations to become too high, nutrients to become too depleted, or pH to wander far from the desired value.

Commercial

The largest commercial hydroponics facility in the world is Eurofresh Farms in Willcox, Arizona, which sold 200 million kilograms of tomatoes in 2008.[18] Eurofresh has 318 hectares under glass and represents about a third of the commercial hydroponic greenhouse area in the U.S.[19] Eurofresh does not consider its tomatoes organic, but they are pesticide-free. They are grown in rockwool using the run to waste technique.

Some commercial installations use no pesticides or herbicides, preferring integrated pest management techniques. There is often a price premium willingly paid by consumers for produce which is labeled "organic". Some states in the USA require soil as an essential to obtain organic certification. There are also overlapping and somewhat contradictory rules established by the US Federal Government, so some food grown with hydroponics can be certified organic.



An Aerogarden using hydroponics and aeroponics.

Hydroponics also saves water; it uses as little as $\frac{1}{20}$ the amount as a regular farm to produce the same amount of food. The water table can be impacted by the water use and run-off of chemicals from farms, but hydroponics may minimize impact as well as having the advantage that water use and water returns are easier to measure. This can save the farmer money by allowing reduced water use and the ability to measure consequences to the land around a farm.

To increase plant growth, lighting systems such as metal halide for growing stage only or high pressure sodium for growing/flowering/blooming stage are used to lengthen the day or to supplement natural sunshine if it is scarce. Metal halide emits more light in the blue spectrum, making it ideal for plant growth but is harmful to unprotected skin and can cause skin cancer. High pressure sodium emits more light in the red spectrum, meaning that it is best suited for supplementing natural sunshine and can be used throughout the growing cycle. However, these lighting systems require large amounts of electricity to operate, making efficiency and safety very critical.

The environment in a hydroponics greenhouse is tightly controlled for maximum efficiency and this new mindset is called soil-less/controlled-environment agriculture (CEA). With this growers can make ultra-premium foods anywhere in the world, regardless of temperature and growing seasons. Growers monitor the temperature, humidity, and pH level constantly.

Hydroponics have been used to enhance vegetables to provide more nutritional value. A hydroponic farmer in Virginia has developed a calcium and potassium enriched head of lettuce, scheduled to be widely available in April 2007. Grocers in test markets have said that the lettuce sells "very well", and the farmers claim that their hydroponic lettuce uses 90% less water than traditional soil farming.[20]

Advancements

With pest problems reduced, and nutrients constantly fed to the roots, productivity in hydroponics is high, although plant growth can be limited by the low levels of carbon dioxide in the atmosphere, or limited light exposure. To increase yield further, some sealed greenhouses inject carbon dioxide into their environment to help growth (CO_2 enrichment), add lights to lengthen the day, or control vegetative growth etc.

See also

- Aeroponics
- Aquaponics
- Folkewall
- Grow box

- Growroom
- Organoponics
- Passive hydroponics
- Vertical farming
- Xeriscaping

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External links

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- Hydroponic Lesson Plans (http://www hydroponicsonline com/lessons/table-of-contents htm)
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- Utah State University Hydroponics (http://www.usu.edu/cpl/research_hydroponics.htm)
- Hydroponics at McMurdo Station Antarctica (http://www.schundler.com/mcmurdo htm)
- Cornell University Commercial Hydroponic Lettuce, Spinach and Pak Choi Grower's Handbooks (http://www.cornellcea.com/handbook_home.htm)
- Hydroponics and Soilless Cultures on Artificial Substrates as an Alternative to Methyl Bromide Soil Fumigation (http://www.epa gov/Ozone/mbr/casestudies/volume3/hydropn3 html)
- Essential elements for hydroponics set up (http://www hydroponics.eu/hydroponics-setup.asp)

NATIVE SUN ENTERPRISES, LLC

NOEL J. HEBETS

Office: 480 488-4889
Fax: 480 488-5875
Mobile: 602 361-2482

Noel@NoelHebets.com
127 East 14th Street
Tempe, Arizona 85281

Tom Solomon
See P 2
[redacted]

December 28, 2010

Attn: Section Receiving Comments on:
Arizona Medical Marijuana Act
Office of the Director
ARIZONA DEPARTMENT OF HEALTH SERVICES
150 North 18th Avenue #500
Phoenix, Arizona 85007-3247

Re: Comments on Draft Rules for Arizona Medical Marijuana Act

Dear Good People:

Please accept the enclosed hard copy of my comments on the 12/17/2010 draft of proposed rules for the implementation of the Arizona Medical Marijuana Act. As you can see, they suggest a mechanism whereby proper rewards for sustainability can be included into the rules.

I would be glad to discuss these suggestions and answer questions at any public hearings you might have. Please let me know if and how I might do so.

Note: Today, I filled in a brief message on your website where it allows for comments to be made electronically. In that electronic message, I promised to send the enclosed hard copy, and asked for an email address where I can also send you the document in an MS Word format.

Sincerely,

Noel J. Hebets
NJH:njh
enclosure

RECEIVED
10 DEC 30 PM 3:25
ADHS
DIRECTORS OFFICE

SUGGESTED RULE FOR REWARDING THE APPLICATION OF SUSTAINABILITY PRINCIPLES IN THE APPLICATION OF THE ARIZONA MEDICAL MARIJUANA ACT

Submitted by:

Noel J. Hebets
NOEL J. HEBETS, PLC
NATIVE SUN ENTERPRISES, LLC

Noel@NoelHebets.com
480 488-4889 fax: 480 488-5875
127 East 14th Street
Tempe, Arizona 85282

Comments:

After the mistakes and problems with how California and Colorado have allowed for the use of medical marijuana, the whole country is watching to see if Arizona will really do it right.

Certainly, one way in which Arizona can set a national example, and do right for all of its citizens, especially those Arizona patients who will use medical marijuana, is to favor those who dispense medical marijuana grown following appropriate principles of sustainability

(Note: The adjectives "sustainable", "environmentally sustainable" and "ecologically sustainable" are loosely translated as "green" and "planet friendly" by most people).

Before proceeding to a suggested rule to accomplish that goal, the following considerations should be recognized as important places to start when considering how to achieve sustainability in our planning and agriculture:

a. In our planning, architecture, landscaping, and the like, we are not likely to develop some single "sustainable silver bullet". No "green gadget on the roof" is ever likely to rescue a project beneath it from the continuing and significant ecological and economic costs of a poor environmental design. Instead, real sustainability will come from orchestrating multiple techniques, while observing two very important and overlapping approaches:

(1) "stay local" – Optimize the use of renewable onsite resources, such as sunlight, shade, nighttime cold, and rainwater, before going offsite for other resources, especially non-renewable resources that come from long distances

(2) "go low-tech" – Apply the fundamental laws of science and nature, especially the basic but critical principles of thermal science, as inherent aspects of the overall design. Before looking at complex and exotic technologies, especially those that function as afterthoughts on inefficient designs, favor low-tech solutions incorporated in the design itself

b. Similarly, in our agriculture, we must strive for locally and organically grown crops if we are ever to balance the needs of the growers and consumers of those crops if not the planet and the rest of its people as well.

check these & like them

Suggested Rule:

REWARDING THE APPLICATION OF SUSTAINABILITY PRINCIPLES

1. When evaluating competing applications for the issuance or renewal of nonprofit medical marijuana dispensary registration certificates, the Department may consider the extent to which the applicant will or does apply general sustainability principles, including:

a. the marijuana that is ultimately provided by the applicant to qualifying patients was or will be grown sustainably and organically, including the evaluation of appropriate factors such as the extent to which:

i. the marijuana plants are grown under natural sunlight;
ii artificial lighting used on the plants is powered by energy produced onsite or nearby;
iii. the plants are grown in soil or other growing media that is composted or otherwise consistent with organic or sustainable growing practices;
iv. few or no chemicals are used the various aspects of the cultivation of the plants and processing of the harvested portions of the plants;
v. rainwater and other sources of renewable onsite water are used in the cultivation of the plants; and
vi. any other approaches or techniques are used to reduce the "carbon footprint" of the operation of the dispensary or otherwise make it more environmentally sustainable.

b. if and how the applicant provides for reasonable verification by the Department and by appropriate independent third-party agents, such as agents of non-profit entities that certify the use and application of renewable energy or organic growing techniques, that such sustainability factors are being consistently observed.

2. The Department may condition the continuance or renewal of dispensary registration certificates upon such reasonable verification of the consistent application of sustainability principles

3. The requirement that marijuana cultivated under the Act be grown in an enclosed, locked facility does not prevent a party who is otherwise legally cultivating marijuana under the Act from using secure greenhouses or translucent materials or open-screening for the roofs, walls, siding or fencing around the plants, or from growing the marijuana in the ground, in lieu of in containers.

NOEL J. HEBETS, PLC
Attorney at Law
(480) 488-4889
127 East 14th Street
Tempe, Arizona 85281

PHOENIX AZ 852

29 DEC 2010 PM 10 T

Attn: Section Receiving Comments on:
Arizona Medical Marijuana Act
Office of the Director
ARIZONA DEPARTMENT OF HEALTH SERVICES
150 North 18th Avenue #500
Phoenix, Arizona 85007-3247

85007+4631

Arizonans Concerned About Smoking

525 W. Southern Ave, Suite 109, Mesa, AZ, 85210 Ph: 480-733-5864 Fax: 480-733-1844
www.acasinc.org

[redacted]

Our Purpose Is To Save Lives

December 21, 2010

Mr. Will Humble, Director ADHS and Staff

Those of us in the medical and public health community have long appreciated the wisdom of Governor Brewer in her appointment choice for Director of ADHS. That wisdom was demonstrated once again by the work of your team in carefully drafting the Prop 203 Medical Marijuana Program Guidelines released on December 16, 2010. The work of your team rates a 10 on the 1 to 10 scale

An especially important component relates to the warning label requirements and side effects risk guidelines (which need to be in writing, not just verbal) just as now occurs in pharmacies every time we receive a medication by prescription. Also, even over the counter medications have warning instructions on the containers plus table of contents ingredients. More and more food items in grocery stores contain similar written labels

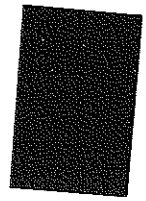
FDA Position Statement: Shouldn't there be a factual FDA position statement in writing on each marijuana product package dispensed to point out what form (s) (oral or otherwise) has been approved (or not approved) as a safety approved "medicine" by the FDA and Federal Food and Drug Laws? Also, for full honest disclosure and as an Arizona State Medical-Legal protection feature in case of lawsuit challenges, should not it be mentioned in writing that the FDA has not approved the smoking form of crude marijuana as an approved treatment method for any medical diagnosis?

Another questions: In addition to your highly commendable requirement for a Dispensary Medical Director, should there not also be a Pharmacists Specialist Director because of the unique training of pharmacists as special experts to point out side effects, interactions with other medicines and added potentiation of cancer risk when carcinogen tar containing tobacco and marijuana are smoked together, etc?

Respectfully,

Leland L. Fairbanks

Leland L Fairbanks, MD, MPH
President, Arizonans Concerned About Smoking
1866 East Vinedo Lane, Tempe, AZ 85284
Tel 480: 820-3740, e-mail; acasinc@msn.com ;



Roger Morgan, Chairman, Executive Director
Coalition for a Drug-Free California
P.O. Box 1450, Lincoln, Ca. 95648 (916) 434 5629 (916) 434 5676 fax (916) 300 5200 cell
Email: rogermorgan339@gmail.com

12/21/2010

To: Will Humble
Director of Public Health Services
State of Arizona

(602) 542 0883 Fax

Roger Morgan, Chairman, Executive Director
Coalition for a Drug-Free California
P.O. Box 1450, Lincoln, Ca. 95648 (916) 434 5629 (916) 434 5676 fax (916) 300 5200 cell
Email: rogermorgan339@gmail.com

12/21/2010

PROPOSED STEPS TO CONTROL ARIZONA'S "MEDICAL MARIJUANA" DISTRIBUTION BASED ON EXPERIENCE IN CALIFORNIA

In the interest of saving a few lives, or the quality of life for all Arizonians, I would like to offer some suggestions so that Arizona doesn't fall victim to the same chaos we have in California. Since the two top priorities of the government are to protect the people and manage tax dollars, it might behoove you to take more time to ensure you have done so .... in the interest of public safety.

1) The Dangers of Medicine by Popular Vote – If by popular vote, marijuana is to be considered a food and drug, the same rules should apply as with other food and drugs. That would include control over production, manufacturing, packaging, testing and identifying contents, identifying dosage and identifying and setting standards for potency. Packaging should comply with safety standards for child proof containers and all side affects duly noted on the labels.

2) Control Doctor's Recommendations – Set new standards for controlling doctor's recommendations, requiring full exams; completed questionnaires on patient's conditions and history with legal medicines; recommendations that are sensible. Stipulate conditions for taking license away for failure to comply. Your proposed rule, that a patient have a relationship with a doctor for 12 months is good. It is worthy to note that most doctor's will not prescribe a drug that has unknown ingredients, unknown dosage and unknown potency when better, legal medicines exist.

3) Control Acquisition Standards – Design and implement a computer based system to make it impossible for a "patient" to use a doctor's recommendation to buy from numerous dispensaries. In Colorado 60% of kids get their pot from ID card holders. A similar survey in California would probably reveal the same result as currently anyone with an ID card can buy from numerous dispensaries.

4) Prevent Underage Use of Marijuana -- Knowing that marijuana is readily available to adolescents and those under 21; and knowing the damage that can occur by marijuana on brains that are underdeveloped (age 25); the only sensible protection policy to ensure kids aren't using is random drug testing. Given the pandemic of health and economic impacts on America from underage use of ATOD, the Governor should be encouraged to mandate non-punitive random drug testing for all middle and high schools.

Scientific information must be communicated to all schools, parents and children on the adverse impacts of marijuana on the body and brain. The brain is not fully developed until age 25, or even later. Marijuana use by males or females can cause death to a fetus and/or cellular and brain damage, deformities to the fetus, and is even mutagenic ... meaning it can cross over generations and affect grandchildren.

Raise the age level to obtain a **marijuana ID card from 18 to 21.** The human brain is not fully developed until age 25, and permanent brain damage including psychosis can occur before then, particularly during adolescence. Unfortunately, the two age groups with the highest consumption rates are 18-25 and 12 to 17. As a nation, we can ill afford the loss of their talents or the economic burden of more addicts.

5) Provide Educational Materials On Facts About Marijuana – Provide materials to enlighten parents, kids, schools, legislators and the general public on the potential benefits and harms, based on scientific evidence (not propaganda) so that they can make enlightened decisions on smoking or consuming marijuana, and determine whether it should be legalized by legislative action or popular vote.

Attach a questionnaire to be signed by all dispensary owners and employees, and "patients" as a criteria for obtaining a "medical marijuana" ID card.

6) Restrict Driving Privileges

A) "Medical Marijuana" ID Card Holders must have their driver's licenses flagged so that arresting officers know they are consuming marijuana and can determine if additional testing is required to determine impairment. Drivers impaired by marijuana should be treated the same as for alcohol impairment. In cases where doctors have recommended excessive amounts of marijuana which would imply permanent impairment, driving privileges should be taken away completely. Deaths due to marijuana impairment have doubled in California in the last five years compared to the five previous years, 1240 vs 631.

B) Under 21 – Make Random Drug Testing a Requirement For A Driver's License Hair analysis four times a year would cost $180 to $200. Hair gives a 90 day window and its harder to cheat the test. Savings in traffic accidents and death could offset the cost, and insurance companies might also participate by offering lower rates. Those with no hair (i.e. gangbangers) will have to subject themselves to random drug testing with urine, saliva or other means.

7) Dispensaries – Replace dispensaries with County facilities to tax, regulate and control the distribution of "medical marijuana;" to insure availability of the drug for those who are not well served with existing legal medicines; and to ensure they are fully informed on the potential harms of smoked marijuana and aware of any and all legal medicinal alternatives, and that the product they receive has known ingredients, dosage and potency, and is packaged properly in child proof containers and the side effects duly labeled in conformance with federal and state laws.

8) Potency Limit - We have information from Dr. Carlton Turner, former director of NIDA'S 5 ½ acre "pot farm" from 1981 to 1987 that "*.....we supply the scientists with marijuana which has a THC potency of two percent ..... The U.S. government and responsible scientists cannot administer a drug to a human being which is as potent*

as today's marijuana. But if we did, the results would be even more sobering." We are in contact with Dr. Turner and NIDA to clarify this, as that statement was made some time ago. Of concern, the marijuana being sold in California ranges from 10 to 21% normally, and goes as high as 37%.

9) Eliminate Glaucoma - The Glaucoma Association recommends not using marijuana. While it can relieve pressure, the quantity required for lasting relief leaves the patient permanently impaired and can actually damage the eye.

10) Permanent Impairment - The responsibility for employers to hire and retain pot smokers unless they can prove impairment, which will certainly drive jobs out of state, based on scientific evidence you can conclude that anyone who smokes marijuana is impaired. The degree may vary on the frequency or use. But because pot is fat soluble, it stays in one's system for up to a month. Even weekend use only stacks THC on top of already retained THC, and the outcome is less work performance, impaired cognition, more accidents, more absenteeism, more sickness, et al. If a person has a right to alter their performance with a mind-altering narcotic, an employer certainly should have the right to not hire them.

I hope these suggestions are helpful to you. Please let me know if I can provide additional information.

Sincerely

Roger Morgan
Chairman, Executive Director